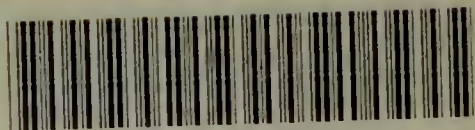


ON
PARALYSIS, LOCOMOTOR ATAXY,
AND OTHER DISEASES OF THE
BRAIN AND SPINAL CORD.

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PRACTICAL TREATISE

ON

PARALYSIS, LOCOMOTOR ATAXY, SCLEROSIS,

SPINAL PARALYSIS, WASTING PALSY,

NEURASTHENIA,

NEURALGIA, SCIATICA, HYSTERIA,

AND OTHER

OBSCURE DISEASES OF THE BRAIN

AND

SPINAL CORD.

BY

S. BERRY NIBLETT,

Licentiate of the Royal College of Physicians, &c., &c.

Uincit Omnia Veritas.

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P R E F A C E .

GREAT advances have been made within the last few years in the treatment of brain and spinal affections. Our progress in these important branches of medicine has been in a more rational employment of remedies and other modes of treatment, more especially in the scientific application of electricity in any of its different forms. The history of medicine in recent years justifies the cultivation of a more sanguine mood than formerly. As in a storm many a captain carries his ship safely through who perseveres in a cheerful and hopeful contest with the waves, so, in extreme circumstances of disease, the physician who is hopeful and has resources, and who has therefore a power of exciting hope in his patient, will often bring the sufferer through, or extend his life, where a less hopeful practitioner would fail. With all the admitted limitations of medical art, it is an infinite relief to the suffering portion of the community to consult a physician who devotes his life to the removal and mitigation of disease, and who does not readily admit any case to be beyond the reach of some benefit. Suppose, for instance, a disease is absolutely incurable, it is certain

that judicious treatment can do much to retard the progress and abate the pæce of such disease. We are therefore encouraged to take an ever increasingly hopeful and cheerful view of the progress of medicine, and of its power to affect beneficially the progress of disease.

I have endeavoured to make this book essentially practical, and to point out, in as concise a manner as possible, those remedies and modes of treatment which have proved of greatest benefit in my own experience.

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DISEASES OF THE BRAIN, SPINAL CORD, AND NERVES.

INTRODUCTION.

“The greatest possible pleasure and happiness which can fall to the lot of a physician is to cure disease. The misery entailed by disease is the greatest of all human miseries. Health means the bliss of man’s mortal existence; disease entails discomfort, distress, wretchedness, premature decay, and death.” The accomplished and learned physician who made the above remarks goes on to say, “It is the height of folly to talk of leaving disease to nature; she can be kind, but she is too often cruel, and in reference to disease we are compelled, as physicians, to look at the cruel side of nature. Nature’s processes may be healing and reproductive, but they are, alas! too often destructive, as most people know to their cost.”

I do not know anything in the whole range of medicine that requires deeper study than is required to treat successfully the different kinds of brain or spinal disease. The treatment of these serious

affections has occupied the intellects and energies of physicians from the earliest time to the present day.

All diseases arise either from an unhealthy, morbid condition of the blood, or from "debility," that is, from a deficiency of "vital force." Nearly all diseases are thus caused by debility, or by an impoverished state of the blood, or by a deranged condition of the nerves or of the liver.

Disease is an evidence of lowered vitality, of an impoverished, morbid state of the blood. This lowered vital power is justly considered to be at the root of all diseased conditions. Nothing but an appeal to the laws that regulate the development and preservation of life can have the result of restoring the health of an individual. The blood must be pure and healthy, a feverish condition of the blood will cause internal derangement; an impoverished state of the blood will cause many severe diseases.

All diseases have a direct tendency to shorten life. An individual, therefore, who is born with any disease or distinct tendency thereto, must necessarily have a less amount of vital force than one who is born healthy. The presence of hereditary disease implies constitutional debility.

Disease implies debility; hereditary disease implies hereditary debility.

If there is a tendency to death from deficient vital force, the physician does everything his knowledge teaches him to keep up those vital powers to

the "life point." But when an individual is out of health, and the vital power is impaired, the functions will not be properly performed. Debility, then, will cause disorder of function and altered nutrition in all our organs.

Degeneration is another form of debility, either constitutional or local: degeneration, then, implies diminution of constitutional vigour.

Admitting, then, that all, or nearly all, diseases are caused by debility and deficient vital force, it is at once evident that all our energies must be directed to restore the lost or diminished power.

The injurious effects of overwork of the brain are well known, excessive mental or bodily toil, monotony, unhealthy climates, exhausting discharges, all these tend to produce cerebral derangement.

By Paralysis or Palsy is meant a total or partial loss of sensibility or motion, or of both, in one or more parts of the body. Incomplete paralysis is called paresis. Paralysis may be caused either from disease of the brain or its membranes, or from disease of the spinal cord or marrow; it may be general if it affects the entire body, or partial if only a portion is affected; when only a small portion of the body is seized, as a limb, or foot, or any particular muscle, or group of muscles, it is termed local paralysis. There is also another affection called reflex paralysis, in which the irritation extends to the central nervous system. Then there is that remarkable complaint known as Locomotor Ataxy, or, as it is sometimes

called, *Tabes Dorsalis*, in which there exists a very interesting and striking train of symptoms, which are chiefly expressed by pronounced disturbance of the locomotary function, diminished reflex excitability, and defects in co-ordination and sensibility.

The origin of this disease is beyond doubt to be found in a peculiar functional nerve disturbance: it has been noted to follow sudden nervous shocks, such as fright, grief, strong mental emotion, and debility resulting from various causes. In many cases, however, no appreciable cause can be assigned. The morbid influence which gives rise to the complaint manifests itself with striking rapidity. The whole process, indeed, takes place in so short a time as to be altogether unexplainable upon any other theory than that of want of nerve force.

In health all organs perform their functions in a certain and definite manner: by that we mean that each organ has special duties—so long as these duties are performed we say the individual is healthy, but when these organs do not perform their natural functions, we say they are in a diseased or disordered condition.

PARALYSIS OF CEREBRAL ORIGIN.

(Paralysis of one side of the Body—Hemiplegia.)

(A Paralytic Stroke—Apoplexy.)

Of all the different forms of cerebral paralysis hemiplegia is the most common: it occurs most frequently on the left side, the loss of power may be either complete or incomplete, it usually attacks the arm and leg of one side, sometimes however the arm is only affected: in most cases the disease comes on suddenly, in others the palsy creeps on more insidiously, there is a feeling of diminished power and increased weight in the part, which is apt to become colder than in health; there is a tingling and numbness of the fingers or toes; if the legs are affected, the difficulty of walking increases, and ultimately the patient loses altogether the power of doing so: the paralysis may then extend from below upwards, when it affects the bladder and bowels, and ultimately some of the organs that are essential to the maintenance of life; in some of these cases there will be softening of the brain or spinal cord, or in others a chronic inflammation will take place. When a person is seized with an attack of paralysis the limbs fall by their own weight, the face

is relaxed and void of expression, and drawn on one side, the tongue when protruded is thrust towards the palsied side, the speech is either lost, or it is thick, muttering and unintelligible. The mental faculties are often impaired, the temper is irritable, and the spirits are depressed. If the patient does not speedily recover, the limbs shrink and grow cold. If only one extremity is affected, it is usually the arm ; in the affection termed transverse or crossed palsy, the upper limb of one side and the lower of the opposite are paralysed. The mental faculties are sometimes uninjured, but more frequently they are damaged, the memory becomes weakened, and there is a tendency to shed tears, and to be distressed by slight causes. The leg usually recovers first, so that the patient can walk about while the upper extremity still remains palsied.

If the attack was caused by hæmorrhage on the brain, or effusion or congestion of that organ, there will probably arise paralysis of the tongue, words will be pronounced indistinctly, and the tongue if protruded will be thrust towards one side. When the clot of blood commences to be absorbed, the improvement of the patient will begin, his speech will become more distinct, his limbs more capable of motion ; the leg will probably recover first. Warmth will gradually return to the limb, and the muscles will increase in size.

In an apoplectic attack the loss of consciousness may be so abrupt that the individual, if standing or

walking, falls to the ground as if felled by a blow, but in most instances the coma is developed more gradually; the coma in different cases is more or less profound, when complete the patient cannot be roused, but in many cases there is not this total loss of mental faculties.

Any of the following symptoms may occur with scarcely a moment's warning. The patient is, perhaps, walking in the street when he staggers, loses consciousness, and falls.

An attack of this kind is called a "stroke," and after the stroke, paralysis, to a greater or less extent, is always present. One limb only may be affected, or both the arm and leg of one side, or even, in some severe cases, both arms and both legs may be seized.

The palsy is seldom complete, the sufferer being able to perform some movements. The face is often drawn on one side. A bright light causes uneasiness and closure of the eyelids, a loud noise produces much discomfort, and a limb when pinched is withdrawn, the power of the mind is greatly lessened, and the faculties are dull.

Gradually the attack passes off, the patient is in a state of mental and physical depression which may last for some days; and often one limb is left permanently, or for a long time, disabled. In the mild form the progress is generally favourable, gradually the speech improves, the breathing becomes better, and the affected limbs regain some strength.

A person who has once had a seizure of this kind is rendered more liable to subsequent attacks, each one of which will still further impair his mental and physical powers. A second attack is more liable to prove fatal than a first, and each subsequent one becomes more dangerous.

A seizure of this kind is caused by hæmorrhage of blood or serum on the brain, the most usual cause of which is a degeneration of the cerebral arteries. This condition sometimes occurs during sleep, but is more often produced by mental excitement or violent muscular exertion, or a fit of anger, or exposure to cold. Diseases of the kidneys or heart will conduce to this affection. There is a milder form of attack than that just described. A person while engaged in any ordinary occupation may suddenly find one half of his body to be paralysed, and be unable to communicate with those about him, there being slight loss of speech; combined with the paralysis there may be loss of sensation in the limbs. An attack of this kind may be the forerunner of others of a more serious nature.

Apoplexy and paralysis are affections which many persons apprehend, and if certain brain symptoms be experienced, especially vertigo, the apprehension is often the source of much unhappiness.

Much importance was formerly attributed to a so-called apoplectic constitution, consisting of shortness of the neck, with considerable embonpoint, and what is known as a full habit, but experience shows

that no reliance can be placed on these or any other external characters, as denoting a predisposition to apoplexy. Persons have been attacked when under mental excitement, as in public speaking, or in a fit of anger, or after violent muscular exercise.

PARALYSIS OF THE MUSCLES OF THE UPPER EXTREMITY.—The muscles of the arm are often paralysed from the effects of rheumatism, or from chronic inflammation, or frequently from exposure to cold. If the deltoid muscle is affected, the patient will not be able to raise his arm, neither will he be able to move it forward. This affection will often be associated with pain at the shoulder joint and arm, and there will also be some wasting of the muscles. Anæsthesia, or loss of sensation, constantly accompanies this condition of motor paralysis, it sometimes extends down as far as the fingers and back of the hand; if this complaint arises from an injury, it will probably be rather tedious, but proper treatment will ultimately restore the nerve. I have not space here to describe fully the various forms of motor paralysis, such as traumatic paralysis, lead paralysis, crutch paralysis, rheumatic paralysis, wrist paralysis, or paralysis of the fingers. These forms of paralysis are usually discovered by the patient on waking in the morning; he complains of pins and needles, and weakness of the parts, this weakness rapidly extends, until he finds he is quite unable to move the arm. Electricity is to be recommended in all these forms of paralysis; the descending labile current will be

most generally useful. A moderate sized electrode should be placed over the deltoid muscle, the other, usually the negative electrode, should be passed down over the triceps muscle, and then over the biceps in front, at the same time keeping the anode upon the deltoid; the "direct" current is to be preferred to the "inverse." You may then galvanise the small muscles of the hand, and also the fingers, the cervical portion of the spinal cord may also be galvanised, and passive exercise should be enjoined.

The most common causes of an attack of paralysis are to be found in mental anxiety, or violent, sudden, or prolonged emotion; or a deranged liver, or an overloaded stomach may cause to be developed a paroxysm.

Case.—This example will illustrate a formidable type of paralysis arising from hemiplegia. A lady, æt. 45, came under my treatment. Some weeks previously she was found in a state of coma, lying on the floor insensible; after the coma had passed off, it was found that she was paralysed on the left side of the body, her intelligence was somewhat impaired, the face was drawn and the eyelids dropped; she complained of pricking sensations in various parts of the body, she was unable to speak plainly. The illness in this case was brought on by mental worry and irregularities of the system; the attack came on at the period of the menopause, there was some derangement of the liver and nervous weakness. Faradisation was applied to the paralysed parts, very marked improvement in all the symptoms was produced, she soon regained power in the leg, and after a time the arm recovered. Stimulating embrocations were used in this case to assist the other

treatment. The medicine prescribed was the phosphide of zinc in combination with the extract of nux-vomica.

Case.—The following is of much practical interest. A lady having lost her fortune by the failure of a bank, and experienced a good deal of mental disturbance, was suddenly seized with vertigo, followed by intense headache, then a feeling of numbness supervened in the leg and arm, paralysis occurred. with spasms of some sets of muscles, there was defective articulation, weakness of the memory, and a general enfeeblement of the mental faculties. This state of things lasted some time, many remedies were tried, such as valerian. arnica, aconite, blisters, thermal waters, &c., but all in vain. The disease became worse, the legs got weaker. She was then advised to place herself under my care; I was of opinion that she was suffering from chronic meningitis of the brain, with effusion of serum. No doubt all these troubles originated from emotional disturbance, especially from anxiety. Wine and a highly nutritious food was recommended, remedies were prescribed with a view to cause absorption of the serum; by the persistent use of both the induced and primary galvanic currents (a stable continuous plexus-nerve current was applied) the paralysis was gradually lessened, the mind improved. The affected limbs increased in size, and further progress of the disease was arrested.

I prescribed the chloride of gold and sodium $\text{AuCl}_3, \text{NaCl}_2\text{H}_2\text{O}$, which is a most valuable preparation for this complaint; gr. $\frac{1}{20}$ should be given twice daily; it increases the appetite and digestive powers, and stimulates the secreting organs. It acts specially on the membranes of the brain, allaying inflammation, and restoring that organ to a healthy condition.

The food should be nutritious and ample, easy of

digestion; it should consist of animal food, meats of various kinds, fish, milk, eggs; the patient may take a small quantity of brandy or whisky once or twice a day. All meats difficult of digestion should be prohibited, such as pork, corned beef, veal; simplicity of diet should be insisted on; if the patient's comfort is dependent on tea or coffee, he should be permitted to indulge in them to a moderate extent, and a glass or two of wine is not harmful; he must not, however, indulge in burgundy or port.

The invalid should go out into the open air as much as possible in a bath chair or a carriage whenever the weather is fine. It will be advisable to sponge the paralysed parts with warm sea-water, or sometimes alternately with hot and cold water.

Case.—The following is a highly interesting case. A gentleman between 40 and 50 years of age retired at night in good health. Suddenly he was seized with severe headache and giddiness, in the morning he felt a little pain in his head, with numbness in the left hand, this gradually increased and in a short time the arm was completely paralysed, at this time he could walk, but in a few minutes he fell from paralysis in the leg, his face was slightly twisted and the tongue was paralysed and speech was difficult. The paralysis was caused by effusion of blood on the brain, and this was probably brought on by mental anxiety and worry. Medicines were given to restore the circulation in the head, and after the inflammation had in some degree subsided, measures were taken for the relief of the paralysis. Electricity was then employed, it is usually useful in all cases of hemiplegia, the rheophores were applied to the palsied muscles and nerves, the

induced current was used in preference to the constant; the muscles, after the fourth application, began to increase in size and strength, and ultimately the patient recovered the power of motion in both the limbs, the leg recovered first, then the power of speech returned, and gradually the arm acquired more strength.

The patient was now anxious to return to his home in the north; I, therefore, supplied him with an induction apparatus, and gave him full instructions as to its use; he afterwards wrote to say he had entirely regained the use of his arm.

Case.—This patient came under my observation at Brighton, where he was recommended to go for change of air, and also to have the benefit of warm sea-water. He was over 50 years of age, florid, thin, and somewhat infirm, but vivacious. His history was as follows:—For some time past he had been unable to sleep at night, he lost flesh and got rather weak, and complained of a little twitching on one side of his face and also of the left arm; on awaking one morning he found he could only move his arm very imperfectly, he felt pain in the head and across the forehead: his speech was affected, he was drowsy, and there was loss of sensation in the left hand; later on the paralysis became complete, and he was quite unable to move the limb. This gentleman also suffered from that remarkable abnormal emotion called claustrophobia. I recommended that the arm and hand should be sponged twice a day with very hot sea water, and afterwards a stimulating embrocation of oil of amber and cajuput applied. The medicine prescribed was *Barii chloridum*, $\text{BaCl}_2 \cdot 2\text{H}_2\text{O}$, this remedy is very efficacious in motor paralysis with impairment of reflex excitability, it should be taken in small doses, about $\frac{1}{16}$ of a grain twice a day after food.

Case.—This is an example of what is termed “transverse

or crossed paralysis": it occurs very rarely. This patient placed himself under my care at Brighton. He suffered from paralysis of the right arm and the left leg, and the face was drawn on the left side, the articulation was imperfect, he had ptosis of the upper eyelid. There was some loss of sensation in the leg. The patient complained of pain in the head and restlessness. There was a slight squint in one eye. He complained of a sensation of "pins and needles," with attacks of cold shivering, he also had double vision from palsy of the external rectus muscle of the eye. For some time past he had suffered from bleeding piles which greatly weakened him, and I have no doubt his illness was caused from exhaustion consequent on the loss of blood. He was treated with the pyrophosphate of iron and diluted phosphoric acid, and was galvanised every other day (a stable nerve-muscle current was used). He was also subjected to a current of ten milliamperes for five minutes to each limb. After the fifth application he improved, and gradually regained the use of his limbs. This was a serious case of cerebral paresis from loss of blood and nervous debility, accompanied with anæmia of the brain and functional weakness of that organ. The treatment was directed to recreate and invigorate nerve-power, he had the benefit of pure and bracing air, generous diet and healthful mental excitement. He was directed to take two tea spoonsful of rum in half a tumbler of milk every morning before breakfast, he went out in a bath chair twice a day, at the end of a month he was able to dispense with the chair and took daily walking exercise, some warm sea-water baths then completed the cure.

Case.—This gentleman consulted me by letter, he writes as follows:—Mine is a case of hemiplegia. I was suddenly seized while walking in the street with loss of consciousness, and of course fell to the ground, I was carried home and seen by my usual medical attendant, who stated that I

was suffering from an attack of apoplexy. After a time I gradually recovered consciousness, and it was then found that one half of my body was paralysed, I was also unable to speak and my face was drawn on one side.

The attack was thought to have been brought on by mental excitement, acting upon a weak heart.

My health gradually improved, but the limbs remain in the same helpless state.

I am anxious to know if you can suggest a remedy or alleviate my distressing condition, being unable to take any exercise.

I placed this patient under a course of the liquid extract of ergot, he was also advised to take a pill composed of phosphide of zinc and extract of nux vomica twice a-day, and I also supplied him with an induction apparatus of two cells, and instructed him to faradise the palsied muscles every day with a low power; in two weeks the patient noticed a gradual improvement in the muscles which increased in size and strength, and at the end of six weeks he was able to go out in the air for a little exercise, this improvement was maintained and ultimately a cure was the result of the treatment.

The following letter was sent me by a gentleman residing in the north. He was under the impression that his medical man had made a mistake in the diagnosis:—

“Having perused your book on Paralysis, I feel I should like to consult you as to my maladies, and shall be glad to know if I can do so by correspondence.”

Case.—I was for two years under the care of my own doctor, when my friends recommended me to consult another medical man, but I do not appear to make much, if any, progress under either treatment. I believe I am suffering from paralysis of the brain and spinal cord, though the doctor pronounces it locomotor ataxy.

I am suffering from debility generally, and can only walk a short distance without resting; my left eye squints badly, and I have a continual dead aching pain at the back of the head. The ends of my fingers are slightly benumbed, and the feet in a lesser degree. I have a general feeling of nervousness, and a sensation of constriction across the chest like a huge iron band clutching it: and a general soreness of the large bones of the legs. I have suffered for a long time from piles and constipation. I should add, I have been twice treated for syphilis: last time five years ago.

I have never been an excessive drinker, I have had a great deal of anxiety, and have always been an active, hard worker. My appetite is fair, and digestion good.

I think the foregoing is a full description of my case, will you please let me know if you can take my case in hand.

This patient rapidly improved under the use of brucia combined with iodide, and later on a course of chloride of gold completed the cure.

This is a most valuable remedy. It is of especial value in cases of profound nutritional disorder, that sap the vitality of the organism, in which both blood and tissue seem to be in fault, and in which there is some hidden and mysterious disturbance of the normal dynamics of nutrition. In these cases it acts as a restorative, prevents the further progress of the disease, and supports the vital strength.

For additional cases of cerebral paralysis, refer to the chapter on Electricity, pages 141 and 143.

In some families there is evidently a predisposition to paralysis, and therefore it has been

considered to some extent hereditary. When a paralysed limb is painful, it should be very gently rubbed with a liniment of chloroform, and, if necessary, some belladonna may be added. Of all the remedies for the cure of palsy, electricity is the most valuable. Some physicians pass a current through the brain, but I do not usually advise it, as it may set up considerable irritation if used too strong, or at a too early period of the disease; I prefer to apply the current directly to the paralysed limb, and along the course of the nerves. Some cases will require the ascending, others the descending current; it is far better to apply a weak current than a strong one. I usually advise an application of from five to fifteen milliamperes, according to the condition of the patient and the state of the battery. Many physicians of great experience prescribe phosphorus for this disease, but it often produces dryness of the mouth and flatulence, I therefore prefer the phosphide of zinc, PZn_3 , which I have used with remarkable success. When the nervous system is jaded and below par, I have invariably obtained the best results from it. Brucine and salicine are both valuable remedies, and are often of great service.

The feet should be kept warm, and thick woollen socks or stockings may be recommended; the patient should not remain indoors, but stay in the open air as much as possible. If the joints and limbs are contracted, massage should be resorted to,

and passive movements of the contracted members. There is no agent so valuable in hemiplegia as electricity, improvement almost invariably follows its use; the faradic current should be cautiously applied to the muscles of the affected parts, disk electrodes, moistened, should be employed, so that all the muscles may be subjected to the electric stimulus in turn; care must be taken not to cause pain by employing a current of too great a degree of intensity. If the patient suffers from anaesthesia, the treatment should consist of the electric wire brush, which should be gently passed over the skin, previously made dry, the wire brush should constitute the positive pole and a wet sponge the negative.

In motor paralysis of the arms or legs, especially if there is loss of sensation, I can strongly recommend sponging the parts with hot sea-water, as hot as can be comfortably borne. It arouses the activity of the nerves and bloodvessels of the skin, and produces a feeling of warmth; it will also relieve internal congestions and will frequently remove pain and irritation, also feelings of numbness and crawling sensations.

The waters of Homburg are often beneficial in cases of paresis or weakness of muscles depending on rheumatic affections of the coverings of the nervous centres. The waters at Homburg contain an abundance of carbonic acid, and as soon as the water is warmed (which is done by passing steam between the double walls of the bath) it begins to effervesce,

so that the skin of the bather is covered with thousands of bubbles of carbonic acid, which produce a most agreeable sensation. Moorbäder or mud-baths, can be had here. Although their physiological effect has not yet been accurately traced, there is no doubt that they act in a different way to warm-water baths : it is thought that their special efficacy is derived from electric streams existing in the mud; the fact, however, is undoubted that they do prove beneficial in a number of cases where other mineral baths have failed. They are useful in some paralytic affections, and in general debility of the nervous system.

The baths are prepared with the greatest care, the "Moor" is provided from the Rhoen-mountain, and is very rich in iron and other ingredients; the mud, after having been thoroughly cleansed, is heated by means of steam.

Pine-leaf baths are also taken here, they are very useful in slight paralysis of a chronic character, they are also prescribed for atrophy or weakness of the muscles: the pine extract is prepared from pine needles supplied by the large pine forests which cover the Taunus Mountains; the extract generally used is a composition of pine-needle oil, the result of distillation and of a decoction of the pine needles. These baths, having a strong aromatic smell, produce a most agreeable sensation on the skin, and render it soft and inclined to perspiration, and re-establish in a remarkably short time the activity of the skin so necessary to health; they also have a decided tonic and soothing effect on the nerves.

CHRONIC SOFTENING OF THE BRAIN.

(Embolism—Thrombosis.)

This disease is called by the French Physicians “Ramollissement.” They describe three kinds of softening (rouge, blanc, jaune), but other physicians consider there are only two kinds, as one of these usually merges into the other. I shall therefore describe two kinds only.

“Red softening” and “yellow softening.” In both these affections headache is very common, the forehead is its most common seat; drowsiness is often present, sometimes giddiness or vertigo, with a sensation of weight; the memory is invariably impaired, and many familiar things are forgotten. Paralysis comes on very slowly, commencing as a slight weakness, there is often numbness of the legs, the weakness increases and the patient is apt to fall. If the arm is affected, things held in the hand are liable to be dropped. If the disease is not checked the paralysis increases, and goes on to complete loss of power: ptosis occurs, and double vision often follows. The faculty of speech may be deranged, and this has been noticed from time immemorial. Thus, Isaiah says: “For with stammering lips and another tongue will he speak to this people” (chapter xxviii). Persons often call things by the wrong names, thus if he wants a

tumbler he will call for a dish, and if he wanted a chair he would ask for a table, and so on. Sometimes there is an oblivion of languages, and sometimes of names.

Case.—The following is a sufficiently characteristic example. A merchant in this city, æt. 49, consulted me under the following circumstances. He was seized with a stroke, and lost consciousness and fell on the floor, when he came to himself he found he was paralysed on the right side, towards evening headache came on, and the paralysis increased; his speech became affected, his memory was weakened, and there was some loss of sensation on the right side. This resulted from chronic softening of the brain, supposed to have been brought on by great domestic anxiety, together with business losses. I recommended the constant galvanic current alternately with the induced current to the paralysed parts. Ergotine was to be taken three times a day. In a few days I had the satisfaction of seeing a marked improvement in all the symptoms. The memory improved, he regained strength and the use of his limbs.

Improvement commenced after six electrical applications, his gait then became almost natural, and the muscles increased in size and strength.

In general nerve exhaustion consequent on chronic disease I prescribe $PZn3$, in combination with extract of nux vomica, or sometimes with lupulin; in nervous breakdown, with insomnia, it is invaluable.

This affection is beyond all doubt very susceptible of relief, and in many cases of positive cure, by the skilful and faithful use of electricity. Suppose, for instance, the disease is absolutely incurable, it is certain that judicious treatment can do much to retard the progress and abate the pæce of such disease.

PARALYSIS OF THE FACE.

(*Bell's Paralysis.*)

Facial paralysis may occur on one or both sides, but usually on one side only. The patient is frequently seized in the night, and the first intimation is in the morning when he arises.

He then finds his face is all awry, and his appearance is peculiar. One corner of the mouth is drawn up, the saliva will run over the lip to the great annoyance of the patient, and the eyelids cannot be closed. The patient cannot wink, and the tears will run over the lower lid and scald the cheek. The tongue will often be found to be partially paralysed, and there will be a dryness of the mouth; if a portion of the ear is affected there will also be deafness.

This affection is often caused by cold, such as sitting in a blast of cold wind; it frequently occurs after a railway journey, the sufferer having sat by an open window.

This complaint is very alarming to the patient, as it often arises from serious brain disease, more especially as it is very sudden in its invasion; he has gone to bed feeling very well, and awakes with one side of the face paralysed.

Rheumatic inflammation may produce this disease if the inflammation occurs in the course of a nerve. It may be caused by pressure of any kind on the nerve, such as sleeping with the closed hand under the face.

Case.—This is worthy of perusal, as exhibiting morbid derangements of the nerve centres. A gentleman was suddenly seized with giddiness, great prostration of strength, forgetfulness, he made use of strange words; if he wanted one thing he asked for another, he knew that he pronounced wrong words, his face was slightly drawn, he then began to speak incoherently, and became quite unintelligible to those around him. It was found he had forgotten the name of everything; he ultimately became speechless. His medical attendant thought he was suffering from softening of the brain. He was afterwards seized with numbness and pricking sensations in the right foot, and paralysis was feared. Gradually the symptoms were removed by appropriate treatment, and he was able to comprehend what was passing about him; he was now advised by his physician to place himself under my care, with a view to treatment by electricity. It was not long before signs of amendment were noticed; his speech first gave evidence of improvement, and his mind became stronger; the treatment was persevered with, and recovery was complete.

Case.—The following is of great interest: it is a case of functional paralysis of the facial nerve. A gentleman, æt. 35, single, called on me bringing a letter from his medical attendant stating he was suffering from paralysis, brought on, as he thought, from softening of the brain. He had led a rather dissolute life, had indulged in excesses of various kinds. Some time since he was seized with a slight "stroke," this was followed by impairment of speech,

so that he could not express what he wanted. Some few days afterwards his mouth was drawn on one side; his right hand was unsteady, so that he could not write, he complained of some pain in his head, with giddiness in walking. The muscles on one side of the face were all relaxed, while those on the opposite side were rigid and drawn; his tongue, when protruded, was thrust on one side, he had some difficulty in swallowing. There was little doubt that this attack was induced by previous excesses, which had exhausted his nervous system and produced functional derangement of the brain. His nervous centres were seriously impaired by debility; under proper treatment he recovered.

In chronic exhaustion of the brain the extract of *nux vomica*, salicine, or brucine, combined with zinc oxydum ZnO , is one of the most valuable medicines; it removes nervous depression and restores brain power. For the restoration of the nerve-function the application of electricity forms the best treatment. The primary current is the most effectual.

This form of paralysis may often be distinctly traced to excessive expenditure of nerve force. The injurious effects of overwork of the brain are well known; it will often bring on an attack of melancholia, with nocturnal restlessness and incapacity for mental exertion. Dissipation of any kind will also tend to produce paresis, or the paralysis may become complicated with dementia and monomania from this cause.

FACIAL SPASM.

(Histrionic Spasm—Hyperkinesis.)

This is an affection of the facial nerve, usually of peripheral origin. The spasms come on in paroxysms, sometimes lasting only a few minutes, at others they may continue for over an hour.

The muscles of the face are suddenly and violently contracted, the angle of the mouth is drawn back, there may be a twitching or winking of the eyelid, the upper lip and the tip of the nose are elevated; when the muscles of the eyelids are affected, the eyes will sometimes remain closed for a few minutes.

This neurosis is usually unaccompanied with any pain. I have seen cases of this disease affecting one side only, it is then called unilateral painless spasm. This affection is often brought on by exposure to cold, or draughts, such as sitting in a railway carriage or an omnibus with the window open, or carious teeth may tend to its production.

This comparatively rare neurosis can usually be cured by electricity; for the restoration of nerve function, a continuous stabile voltaic current of from six to eight cells, from a chloride of silver battery, should be applied about three or four times a week

for five minutes to each affected muscle, the negative pole should be placed in the sub-aural position, and the positive over the facial muscles, especially on the infra-orbital and supra-orbital foramina.

In several cases I have succeeded in effecting cures by this treatment, conjoined with constitutional remedies.

Care must be taken not to employ a current of too great a degree of intensity, as harm may result by neglect of this precaution.

ANÆMIA OF THE BRAIN.

This affection is known to the French physicians as *Anémie Cérébrale*.

In this disease the blood is impoverished, or the quantity of the fluid is reduced below the normal standard : it is caused by impaired nutrition, or from loss of blood by an accident, or from bleeding piles, or profuse menstruation, or from general weakness. The symptoms are :—giddiness, paleness of the features, the pulse is frequent and weak, the hands and feet are cold, headache is often present, there is a feeling of constriction across the head, ringing in the ears is often complained of, and loud noises cause a sudden start, the skin is cold and clammy, the patient complains of “pins and needles,” and sometimes vomiting occurs.

The pyrophosphate of iron is to be recommended in this complaint, combined with the diluted phosphoric acid and tincture of *nux vomica*. If the iron should not agree, then salicine or brucine may be prescribed. The patient should take wine, and good nourishing diet, consisting of animal food, fish, milk, and eggs. Emotional disturbance should, if possible, be avoided, and the invalid must take only very moderate physical exercise.

LOSS OF SPEECH

(Amnesia.)

Aphasia, as it is termed, may be either partial or complete. This interesting disease was studied by the ancients, but its true nature was not comprehended. Sextus Empiricus was the first writer who mentioned it, he lived 200 years before Christ. Occasionally the Aphasic is conscious of the absurdity of his remarks, he will laugh in a silly manner, or appear annoyed; he will often substitute other words for those intended, whilst others will mix syllables together in an incongruous manner.

As a rule, an Aphasic who cannot speak cannot write, but there are many exceptions, as some are able to write fairly well. Some patients although they cannot speak can sing, some quite well; others will be able to read, but will probably drop some of the words and will be unconscious of the mistake.

If this disease is combined with paralysis of other parts, it is an indication of serious cerebral trouble.

This affection yields rapidly to electrification; external applications to the throat will rarely fail to effect a cure; two or three applications are often sufficient, but in other cases a longer course of treatment will be required.

TUMOURS OF THE BRAIN.

The brain is liable to be attacked with tumours of various kinds, such as gummata, hydatids contained in a cyst, cancerous growths, scirrhus, fibrous tumours, sarcomata, gliomata, aneurisms, either small or large, pearly tumours, &c. The symptoms of these tumours are as follow:—Paralysis, convulsions or fits, headache, giddiness, vomiting, intolerance of light, intolerance of noise. Pain is one of the most persistent symptoms; it is often intense, and is sometimes combined with muscular twitchings. The pain may be either of a dull, aching character, or of a sharp, lancinating kind; it sometimes reaches a stage of great intensity. The pain is often aggravated at night, squinting occasionally takes place, the speech is now and then affected, the memory fails, the temper becomes irritable, and the sufferer will gradually become imbecile.

There may be convulsive movements of the limbs, or disturbances of equilibrium; he will twist suddenly round, or will go backward.

Case.—The following may be cited as a good instance of this affection. Miss —, æt. 28, came under my observation. A few months before she had met with an accident, having been thrown from her horse, she was partly stunned; the next day she awoke with an intense pain at the top of

the head, of a throbbing character; this continued for some days; on examination a hard swelling was discovered on the crown of the head, about the part where the pain had been felt; this swelling increased day by day; the intellectual faculties became weaker, and the pain increased.

She now had a feeling of numbness with a cold creeping sensation about the lower limbs; she also began to be troubled with tingling, crawling sensations about her face and neck; ptosis supervened, and the right arm became weak and ultimately paralysed. She now felt dizzy, and sudden flashes, like shocks, appeared to pass over the body.

I was of opinion that the patient had a tumour pressing upon the brain, probably in the neighbourhood of the cerebral hemispheres.

Case.—The morbid changes produced by cerebral disease are well exemplified in the following case, which was one of gummata, or gummy tumour of the brain, caused by the poison of syphilis; this patient always enjoyed good health until he contracted this complaint; he was seized with slight paralysis of the face, there was loss of uniuscular power in the left arm, which felt cold; he had suffered from a "reeling and swimming" feeling in the head for two months previously, objects appeared to "whirl round," he was of a decidedly nervous temperament; he complained of dragging of the muscles at the back of the head, also of formications of the feet. I had no difficulty in this case of diagnosing the nature of the malady; I placed the patient under an anti-syphilitic course of treatment, and cautioned him with regard to the use of stimulants; I advised him to abstain from brain work. He rapidly improved, and after a change of air to the sea was completely restored. In these tumours, of the nature of a gumma, there is usually much headache, the symptoms develop slowly, the pain becomes worse at night, and if proper treatment is not resorted to paralysis will probably occur.

SYPHILIS OF THE BRAIN AND NERVOUS SYSTEM.

(Secondary or Tertiary Manifestations.)

The patient presents a peculiar cachectic appearance, there is some enfeeblement of the intellect, memory appears to be blunted, he will be irritable and peevish without appreciable cause, severe headache will come on often at night, he may fear he is going to be seized with fits, or he may have epileptic fits with convulsions, or only very slight attacks, such as temporary loss of consciousness, lasting only a short time. He will probably have secondary symptoms, such as skin diseases of a syphilitic nature, of a copper or ham colour, or mucous tubercles, sore tongue, loss of hair, pain in the bones of the shins, or other parts, and also a sore or ulcerated throat. If most of these symptoms are present, there can be no doubt as to the nature of the case, especially if the patient admits having had syphilis, although that may have occurred many years since.

Constitutional syphilis will produce the symptoms before enumerated, and various other brain troubles, such as caries of a cranial bone, or alteration of the arteries of the encephalon, or it may be a gummy

arteritis, and that syphilitic arteritis will often be the cause of thrombosis and softening of the tissue of the encephalon. We must always look for cutaneous manifestations if the symptoms lead to the belief that the brain or its membranes are the subject of syphilitic inflammation or softening, or a gummata.

Cerebral Syphilis is of a very grave character, more especially if the individual is attacked with paralysis of any muscles or groups of muscles, or if he is weakened by excesses of any kind, or has indulged unduly in alcoholic stimulants. There is no doubt this disease does occasionally produce epilepsy, although the syphilitic epilepsy may only be manifested under the form of the "petit mal."

Headache is regarded generally as an essential symptom of this disease, and is often combined with sleeplessness. Syphilitic deafness is not unfrequently met with, it often proves intractable unless the treatment is undertaken at an early stage. Syphilitic paralysis demands the utmost care, but if subjected to proper treatment it is not an obstinate affection.

This serious complaint may be brought on by bad specific treatment of the original disease, by emotional disturbances, nervous affections, excesses of all kinds and anything that weakens the nervous system.

Case.—The following will illustrate such complaints as I have referred to, and also the causes that gave rise to them. A gentleman, about 45 years of age, consulted me. Many years previously, before his marriage, he had contracted, in Paris, a contagious disease, which had been badly treated. He was a short time since attacked with pain in the head,

a sensation of weight at the top of the head, failure of memory, aberration of speech, forgetfulness of words, contractions of the muscles of the face, sudden flashes like electric shocks passed through the system, his vision was affected, the limbs began to feel weak, and he feared paralysis was coming on. The headache constantly recurred at night, and this with nodes and pain in the bones showed clearly that the disease was syphilitic affection of the brain, he also suffered from sleeplessness. The symptoms in this case were well marked, and left no doubt as to the treatment. He was entirely cured in less than three months.

Case.—The two following are good examples of nervous syphilis. A married lady consulted me, she had an eruption on the shoulders and back of a tubercular nature. She said her right arm and leg seemed to be getting weak, she had severe headache, and the pain was confined to one spot, the eyes were red and watery, her mind had become greatly changed, and she had become melancholic. The feebleness in the leg seemed to be increasing, and she feared it would become paralysed. She suffered greatly from wakefulness, the hands felt weak and rather numb, she has “pins and needles” in them at times. Her husband persuaded her to see me, as an homœopathic physician had hinted the nature of the complaint, which he called “l'encéphalopathie syphilitique.” There was in this case a small gummy tumour which had given rise to this pseudo-paresis.

In these cases the patient usually presents a peculiar cachectic appearance, there is much emotional irritability, and some mental excitement: the liver is frequently affected with functional derangement.

Case.—In another patient the symptoms were as follows:—Mr. —— complained of headache, was drowsy, suffered

from giddiness and attacks of despondency, singing in the ears; he experienced constricting pain round the body, and electric-like in character; he complained of muscular debility, backache, loss of memory; his expression was one of anxiety and depression, with pallor of the face, the hair was falling out, and the weakness of the limbs was so great he could hardly walk, and expressed a fear that he should become paralysed unless something could be done immediately to relieve him. These troubles were caused by a syphilitic lesion, and were developed by overwork and exhaustion. In this case the original disease had been contracted abroad many years previously. It is of the utmost importance to find out the origin of these obscure nervous diseases, and of overcoming, as promptly as possible, by special treatment the poisoned condition of the blood.

Alcohol taken in excess appears to act on the spinal centres, in the same manner as it does on the brain, it impairs and depresses the functional power of both.

Excesses of any kind tend to produce nervous exhaustion, I have seen many cases of paralysis that might be attributed to this cause; dissipation lowers the nervous energy and predisposes to disease.

Patients suffering from nervous syphilis will often derive benefit from a course of sulphur waters at Aix-la-Chapelle. They are also useful in functional paralysis of the spinal cord.

SYPHILIS OF THE SPINAL CORD AND NERVES.

(*Gummata—Sclerosis.*)

SYPHILITIC PARALYSIS.—Nervous syphilis comes on at an advanced period of the disease, and in persons who suffer from syphilitic cachexia. The characteristic symptoms are pains in the spine, or radiating to the limbs, formication, creeping feelings, numbness, then rigidity of the muscles comes on, and is succeeded by contractions and painful cramp; these symptoms gradually become aggravated, and eventually end in paralysis, which occurs first in the lower extremities, and advances rapidly. If the genito-urinary organs are involved, the matter becomes serious. Often skin affections supervene. In other cases the bladder becomes affected with a certain degree of weakness, which is manifested by incontinence, or, perhaps, by retention of urine.

In these cases the symptoms are often rapidly developed, and a specific treatment instituted opportunely, if carefully selected, will check the farther advance of the disease.

Case.—The following is one of Spinal Syphilis. This gentleman, who was engaged in the City, consulted me for the following symptoms. He was first seized with

shooting pains in the back and limbs, then numbness came on at the finger tips, afterwards a feeling of great weariness and debility, the hands began to grow weaker, so that he could not write; the disease then extended to the muscles of the forearm and shoulders, and he complained of tingling sensations in them; he could not sleep well, and his appetite was bad. This was a grave form of syphilis of the nervous system, it was one of the tertiary manifestations of the complaint, the original infection had taken place some years before, at that time he was troubled with some skin eruption, but had been in moderately good health until this attacked him. I placed him under a course of anti-syphilitic remedies, which resulted in a good recovery.

Case.— This patient consulted me by letter. He writes: "Since reading your treatise on paralysis, I am led to think you may be able to alleviate my sufferings. I have consulted many eminent physicians, both in London and Scotland, but without permanent benefit. The disease commenced many years ago, and was undoubtedly brought on by dissipation. I gradually began to lose the use of my legs, they felt numb and cold; the paresis increased, and I was unable to walk. I now suffer from pain in the back, and an aching, dragging pain in the legs and thighs; there is also some loss of power in the arms, the muscles are somewhat wasted; I am extremely nervous and sensitive; I have no appetite, and find great difficulty in getting to sleep." This patient was placed under appropriate treatment, he gradually improved, and was nearly recovered in two months. In this case there was a feeble state of the nerve centres, especially of the spinal cord, which was brought on by previous excesses. The treatment was accordingly of a restorative nature, combined with pure air and a generous diet; he took a little rum and milk before breakfast. The palsied parts

were sponged with hot water in which some sulphuret of potassium was dissolved; this is an excellent stimulant to the cutaneous surface. Sulphur baths are very useful in paralysis depending on debility or nervous exhaustion.

Galvanisation of the spinal cord is often of great service in this affection, the most useful form will be a spinal-cord-plexus current of from five to fifteen milliampères, also peripheral faradisation may in some cases be required, but a complete cure cannot be obtained unless the patient submits himself to a proper course of internal remedies; bearing in mind that this particular disease is of a constitutional nature and can only be removed by constitutional remedies, the blood must be thoroughly purified and the nervous system strengthened and exhilarated.

This is a specific blood disease in which the characteristic symptoms are of a nervous kind, consequently a "*maladie chronique il faut un traitement chronique.*"

This affection yields readily to the proper remedies. All means should be adopted for the purpose of reinstating good health. The diet is of great importance, and should consist of the most nutritious and wholesome food, meat, eggs, milk, and other articles calculated to improve the tone of the system.

SPINAL PARALYSIS.

(Paralysis of the Lower Extremities.)

(Chronic Inflammation of the Spinal Cord.)

PARAPLEGIA or paralysis of the lower half of the body arises from functional or organic disease of the spinal cord or its membranes. It usually commences with weakness or numbness of the feet and legs, or with a sense of tingling, or "pins and needles," it creeps on slowly and insiduously, there is a feeling of diminished power and increased weight in the legs. Sometimes, however, the palsy comes on rather suddenly, the difficulty of walking increases, and ultimately the patient loses altogether the power of doing so: the disease will commence with pain in the back or in some portion of the spinal column, and then suddenly an increase of pain comes on with loss of power of the lower extremities. The palsy then gradually extends upwards until it affects the bladder and rectum, and ultimately some of the organs essential to the maintenance of life.

It is often brought on from exposure to cold, or from some organic disease of the nervous centres, it frequently arises when the patient leaves a warm room and has gone out upon cold ground with the

feet and legs thinly covered, or from long standing in the cold and wet, or long continued exhaustion may induce an attack. This form of paralysis begins in the feet, and in the course of a few days extends over the limbs, until the paralysis becomes complete, it may even extend to the trunk or upper extremities, then the breathing will become affected, and the muscles of the face and the speech will be involved, this affection is then termed "*Ascending Paralysis.*"

Incomplete paralysis of the spinal cord is termed "*paresis.*" It is sometimes induced by excessive fatigue, I have known it come on after a long walk in a rather delicate young lady. The patient is seized with faintness, breathlessness, palpitation, and other symptoms of excessive debility, such as hyperæsthesic pain in the back and sleeplessness. The sufferer is extremely nervous and sensitive; there is local tenderness over the spine, as tested by pressure; the appetite is poor and capricious, with aversion for meat; the legs then begin to fail, and sometimes they start, there is a loss of sensation in the legs, and they will waste considerably.

Sometimes an attack of paralysis of the lower limbs is preceded by violent shivering, also by giddiness and vomiting, then loss of motion, and also loss of sensation comes on, and the limbs become palsied. If only one limb is affected the disease is called *monoplegia*.

Paralysis often succeeds diphtheria, in some cases it attacks both the upper and the lower limbs. There

is no doubt that a sunstroke will predispose the nervous system to be attacked with paralysis, as it vitiates the condition of whole nervous centres.

Reflex paraplegia may be caused by worms, especially the tape worm; the legs become very weak, the paralytic symptoms may vary in their intensity; when the complaint is caused by worms the paralysis is seldom complete, but the limbs are cold, the muscles become very feeble, and in some cases atrophied, there will be a sense of weight with tearing pains and slight tremors in the legs. I have known all these symptoms rapidly disappear on the expulsion of a tape-worm.

TUMOURS of the spinal cord or its membranes may occur at any period of life, they may arise from a blow or a jar, or from an accident of any kind. The symptoms are very variable, but the patient will probably suffer from various paræsthesiæ, such as numbness or tingling, or sensations of burning alternating with coldness, with a feeling of constriction round the waist as if a rope was tied round the body, there will also be shooting pains in the limbs which will be compared to sciatica. As the disease advances the pain will increase in severity, and paresis will probably be developed. The gait will gradually become staggering, the sufferer will reel from side to side, and ultimately the paralysis will become complete.

CHRONIC INFLAMMATION and softening of the spinal cord or its membranes is usually developed very

slowly, and oftens occurs in persons of a nervous disposition. It may be brought on by dissipation, or from excesses of any kind, but the most common cause of this affection is exposure to cold or damp, or living in damp localities. Severe bodily or mental exertion both predispose to the complaint, and act as exciting causes in its production. This affection constantly terminates in paralysis of the legs. Various indefinite symptoms referable to the spinal cord may have existed for months, or even years, before the disease is fully developed, such as abnormal sensations in the limbs, tingling or numbness, dragging pains, muscular feebleness, mental disturbance, &c. After some time paralysis comes on very gradually, the muscles of the lower limbs are first affected, and the paralysis, sooner or later, may extend to the arms and ultimately to the body.

Case.—The following is a well-marked example of Spinal Paraplegia. Mrs. —, æt. 35, after exposure to cold, was suddenly seized with shivering, pain in the back, and vomiting; the spinal pain gradually became intense, and was increased by pressure. She then complained of loss of power in the legs and was unable to walk without being greatly fatigued. The complaint progressed; she had shooting pains down the spine and around the body, twitching of the muscles, and eventually paralysis came on in both legs. After consulting many physicians, she was advised to try the waters at Buxton, but without any good result. She then came under my treatment. I advised the application of dry cups to the spine twice a week, and chloride of gold and sodium, with conium; the lost power in the limbs gradually returned, ergotine was then given, also hyoscy-

mine and extract of belladonna. Nutritious food and extract of malt was recommended. Strychnine had been prescribed by an eminent country physician, but it made the patient worse. The descending current is to be advised, the positive pole being placed upon the nucha and the negative on the sacrum (a spinal-cord-plexus current), the application should last for ten minutes every other day. I have by these means been very successful in curing some very severe cases of spinal paralysis. The physician should if possible apply the galvanism himself, as it is of great importance that it should be properly used.

Case.—Mr. — came under my charge at Brighton, when I found his condition was as follows:—He was awake in the night with painful contractions of the muscles of the legs and gradually lost all power over them; they felt cold and numb, sensibility was impaired, before then they felt as if they had fallen asleep; he had pains like rheumatism, with a sensation of “pins and needles” and a feeling of numbness. He could not stand without help; speech was somewhat impaired. I recommended spinal galvanism (a spinal-cord-root current) and the application of dry cups to the spine. This patient’s condition was quickly improved, the power was regained in the limbs, and in a few weeks there was no trace of the disease left.

The next is a case of Partial Paralysis from spinal degeneration.

Case.—Miss — writes to me from the south of England. I now suffer from a loss of power in the legs, the limbs are not actually paralysed, but very weak and tremulous. I am of a decidedly nervous temperament and much depressed; have headache at times and dizziness; I can only walk with the assistance of a stick. The doctor I have seen calls the complaint “paresis” of the spine, and says it is brought on by anxiety and overwork. I am often agitated, have no appetite, and feel languid and feeble, cannot sleep

well, numbness sometimes comes on, and "pins and needles." I am anxious to know if you can relieve or cure me.

Ergot was recommended, and extract of conium was given at bedtime. Massage was used to the legs every day, the muscles were kneaded and rubbed for nearly half an hour, and the galvanic current was applied to the spinal nerves (descending stable); as the patient improved the galvanic current was changed for the induced current, which completed the cure.

In two weeks she could walk out a short distance, and in three weeks more all weakness of the legs had disappeared; she can now walk several miles without fatigue.

Many diseased conditions of the spinal cord are of a complicated nature, and require considerable judgment to diagnose the exact seat of the affection; thus it may be difficult to draw the line where irritation ends and congestion begins, and it may be equally difficult to determine where the condition of hyperæmia becomes a condition of inflammation. I have no hesitation in saying that nearly all cases of spinal paralysis can be benefited by electricity, the earlier the patient is submitted to treatment the greater chance there will be of complete recovery; in the early stage the séances should be short, but in the chronic stage of the disease the application of galvanism may be more protracted. Spinal paraplegia should be treated by galvanisation to the spine, and also with peripheral faradisation or galvanisation. Excessive fatigue will sometimes promote (in persons predisposed) the occurrence of spinal paresis.

Case.—This patient wrote to me from Scotland ; as the case was a serious one, I advised him to come London for a short time so that I could constantly see him:—

Some time ago I sent for a copy of your work on Paralysis, Diseases of the Brain, &c., and from it I am afraid that I am suffering from spinal sclerosis: the symptoms point more to it than anything else.

The following is a description of my case. Two years ago last March I began to feel a gnawing pain about three inches from the bottom of the back bone, near the kidneys. That pain is now there, and always is more or less. I placed myself under the care of a physician, who said it was nothing but lumbago. However in three months I was no better for his treatment, so consulted another doctor, who blistered my back and gave me medicine, but no good resulted. About a year ago I began to notice that I could not walk straight, but went from side to side ; this has got gradually worse, and I cannot now walk across a room without catching hold of the chairs and table for support. I have very great pains in the thighs, down the shin bones, and round the ankles, but the most fearful pains are under the knees, the right worse than the left, and the pains are worse as a rule in bed. Sometimes when I am trying to walk my knees give way, and I fall about.

My bowels are constipated, and the bladder weak. Some time ago I lost all taste and smell, which has never returned. I have lost 30 lbs. in weight, and my muscles have wasted a little ; appetite generally good.

Some twelve years ago I had syphilis, but never had any spots about the face or neck.

I consulted another medical man, who pronounced my case to be a progressive degeneration of the spine, but my present medical adviser says it is nothing of the kind, but is rheumatism in the marrow and the ligatures of

the spine. My hands are very stiff and numbed, but I can grasp anything hard enough. Age, 40. I am always worse in the morning, when I get out of bed, which takes me some time to do, as I cannot stand for some little time. I frequently have a peculiar feeling in the stomach, as if some one was pressing it. I think I have now given you full particulars of my case, and should be obliged by your opinion thereon, if you can cure or patch me up.

The patient was treated by a galvanic current just sufficient in strength to produce slight muscular motion. The spine was also subjected to the primary current, a spinal-cord current of 15 milliampères, from a battery of 30 cells. This treatment was kept up for two months, and resulted in an approximate return to the normal strength of the affected muscles.

Frictions are exceedingly useful; they may be applied with a dry towel or with the hand, several times in the course of the day. If the limbs feel cold they should be soaked in hot salt and water at a temperature of from 110° to 120° Fahrenheit; or if convenient, sea water may be used. I can also recommend the application of a bag filled with hot salt, which can be renewed when necessary.

Case.—This patient consulted me under the following circumstances. About two years ago he was compelled to seek the advice of his family physician, who told him he had ruptured a small blood vessel at the base of the spinal cord, which caused a sensation of pricking as of “pins and needles” in his legs and feet, and at the bottom of the back. His legs then became completely paralysed for

about a fortnight, and then gradually got better, but he still complains of a sensation of numbness in his feet and legs, also at the bottom of the spine, especially after sitting any length of time; the feet also feel lumpy, which makes it difficult to keep steady when standing. He complained mostly when sitting of numbness. He also suffered from that remarkable emotion known as claustrophobia.

This train of symptoms points to a serious functional derangement of the cord, and upon examining this patient I could not find any evidence of organic disease.

I prescribed a mixture of brucia and dilute phosphoric acid, to which was also added some tincture of lupulin, which the patient took regularly with the most happy result. In three weeks all the worst symptoms had disappeared, and in five weeks he was approximately cured.

Brucia may be given with great advantage in all functional derangements of the spinal cord, or of the brain, but it must on no account be used if there is evidence of organic disease.

Case.—This young lady called on me at Brighton, saying she had come there for the benefit of sea air and also to place herself under my treatment. She was unmarried, about 27 years of age, fair, and healthy looking: she consulted me for weakness of the lower extremities, attended with spinal tenderness and pain in the region of the stomach. She had been in the habit of taking long walks, but felt considerable fatigue after them. While bathing in the sea she was seized with faintness, on recovery she felt a slight degree of weakness in the legs and knees, and after that attack she was unable to walk as before. The feet were cold and numb and she could hardly stand. She complained of headache, and the periods were stopped, probably from a chill while bathing; she suffered from headache and other anomalous symptoms, with general debility. Galvanism to the spine was advised (a spinal-cord-nerve current), after the

third application the menses appeared, the extremities became warmer, and she could walk better: after the second menstruation she was entirely relieved of the weakness of the limbs and was ultimately restored to her usual health.

Case.—Mr. —, age 42, was brought to me by his friends. He is paralysed to a considerable extent in both feet, they are very weak and flop down in walking, both his hands feel weak and rather numb, he has “pins and needles” in them at times, there is some loss of sensibility in the palsied parts. His head is hottish, with some pain in it, he feels feeble all over, the tongue is coated at the roots. He thinks the complaint was brought on by excess in drinking and smoking.

Under treatment he improved gradually, and ultimately quite recovered.

For additional cases of this affection, refer to the chapter on Electricity.

The sulphate of manganese, $\text{MnSO}_4 \cdot 5\text{H}_2\text{O}$, is of considerable benefit here, it acts by improving the condition of the impaired blood; it restores nervous energy, and improves the condition of the muscles.

Phosphorus and ergotine, in combination with conium, have been found useful in the treatment of these affections; chloride of gold has also proved very efficacious.

Electricity (p. 120) is one of the most important agents in the treatment of this affection. Spinal galvanism is very useful; the electrodes should be applied according to the position of the disease. I usually apply at first an ascending stable current to the spinal cord, commencing with about

five milliamperes, and increasing the current gradually up to ten or fifteen. The faradic current may also be required to the muscles. I frequently recommend the application of dry cups (see p. 158).

The patient should reside at the sea-side if possible, as sea air has a very invigorating effect on the system, and should apply hot sea water to the paralysed extremities. Good food and certain tonic remedies are of much importance; he should be out in the open air as much as possible.

Massage is to be recommended as auxiliary to the other treatment, but above all things the paralysed part must be kept warm, and it should not be allowed to hang down or to dangle about, but it should be placed in a horizontal position.

If a paralysed part is painful, it should be rubbed gently with chloroform and olive oil, or a scalded seaweed may be applied to the painful parts for ten minutes; it will usually afford much relief. The most ancient fomentation that we read of was made from figs, being used for a boil when Hezekiah was "sick unto death." "And Isaiah said, take a lump of figs: and they took and laid it on the boil and he recovered." 2 Kings, ch. xx, ver. 7. If the pain is very severe, a few drops of chloroform, or wine of opium, may be sprinkled on the seaweed. Koumiss may be taken daily in moderate quantities.

All those who have been successful in the treatment of chronic diseases have paid attention to the question of food. The appetite is not rarely capricious,

and the digestion is apt to be disturbed. The fancies of the patient ought not to be disregarded ; the food which he desires, if it is in any way permissible, ought to be procured for him : it should be as varied as possible, and the cooking and serving of meals should be nice.

We must first endeavour to induce the individual to take as much nourishing food as his digestion permits, and to endeavour to increase the appetite and digestive powers by air and exercise, and sometimes by medicinal substances. Also to give as much choice and variety as can be obtained. And to avoid articles of food, or of relish, of inferior nourishing value, if by these the appetite for more necessary articles is diminished, or the digestion of the latter is disturbed.

Highly seasoned dishes and great mixtures of food, produce congestion of the liver, and disorder of the stomach. Beef or mutton, well but not over dressed, game or poultry, fresh vegetables, are all admissible. Eggs are very digestible, and when quite fresh and lightly cooked are highly nutritious. They may be taken raw, beaten up with milk or a glass of sherry. Either boiled or poached they are very beneficial. Sufferers from paralysis should avoid sauces, nuts, pickles, spices, salted, smoked, dried, potted, or otherwise preserved meats, veal, pork, dried fish, lobster, salmon, pies, pastry, or new bread, cheese, jams, raw vegetables, dried fruits, liqueurs, cider, and all stimulants except with food.

Exercise in the open air is almost as necessary as food, because it enables the invalid to take nourishment in a sufficient quantity to improve the nutrition by taking up fresh material and removing the waste. When active exercise is impossible from great weakness or paralysis, the movement in a bath chair is especially to be recommended ; open carriage exercise is likewise good ; or if the sea is calm, a row in a boat will prove of great benefit.

The objects of treatment are the promotion of the circulation and nutrition in the paralysed muscles, together with the increase, so far as possible, of their functional capacity. It is to be remembered that paralysed muscles do not of themselves resume their normal capacity, even after the causes of the paralysis are removed ; and having been for a considerable period paralysed, they may remain so indefinitely, if appropriate measures be not made for their restoration. Electricity is a potential agent in promoting the objects stated, it promotes circulation, nutrition, and is a substitute for the will as regards the functional exercise of the muscles : this must be combined with passive movements and volitional exercise.

The objects of treatment are, first to arrest the progress of the disease, and for this purpose the patient should, so far as possible, be withdrawn from every agency which may be supposed to have a causative operation. The system should be well nourished, and measures employed for the restoration

of the general health. All insanitary influences pertaining to body and mind are to be removed.

Galvanism, faradism, as well as other forms of electricity cures paralysis by increasing the quantity of nerve force and removing impediments in its course : it arouses a nerve which has neither sensation nor power of motion, and thus it restores its sensitiveness and powers.

From whatever cause paralysis may arise, the affected part is deprived of nerve power and muscular motion is lost, therefore the flow of blood through the dead limbs is greatly weakened, and the circulation of the blood in the small vessels cannot be restored so long as the nerve force is wanting ; it therefore follows that a paralysed limb usually feels cold from want of proper circulation of the blood. Electricity possesses the peculiar property of swiftly conveying nervous energy through the small blood vessels, it accelerates the passage of the blood through the smallest capillary vessels, and the nerves receive from the blood vessels whatever they need for recovering their own energy. The nervous energy thus restored is imparted to the muscles themselves, and thus nerve power is established and paralysis is removed. Hence we conclude that galvanism or faradism have the power of curing paralysis by promoting the circulation of the blood through the enfeebled blood-vessels, and thus renewing the nervous and muscular force.

In delicate persons of a nervous temperament

the changes of weather, and especially an east wind, are known to act prejudicially, and consequently invalids suffering from any kind of paralysis are usually worse when the wind is in the east.

A course of baths at Wiesbaden, in Germany is to be recommended in certain cases of paralysis due to chronic spinal affection of the cord or its coverings. I frequently have the pleasure of meeting my patients there, and also at Homburg, and I have found them in many cases rapidly improve under a course of baths, and by drinking the waters. The baths at Wiesbaden are taken early in the morning about an hour before breakfast, and the patient should remain in the bath about twenty minutes or longer, and after the bath there should be complete repose. The water is much too hot to be used as a bath as it issues from the springs, and it is therefore allowed to cool during the night in reservoirs connected with the bath-houses. The baths are given in certain hotels, and these contain about 850 baths. These are for the most part in the neighbourhood of the hot springs.

It is undoubtedly an immense convenience, especially to those who are crippled by their maladies, to be able to get their baths in the hotels they live in. The baths are taken in the form of "full baths" and douches. The routine of drinking begins at six a.m., and from that hour till eight, the young women at the Koch Brunnen are busily engaged in supplying the crowd of applicants for glasses of the

steaming hot beverage, too hot to be drunk at a draught, so it has to be slowly sipped or allowed to cool a little before it can be swallowed. Some patients are advised to drink one glass of water before breakfast, another between eleven and twelve, and a third at five p.m.; others drink several glasses before breakfast. The environs of Wiesbaden are exceedingly agreeable, and many beautiful walks and drives may be taken through the forests which cover the surrounding hills.

Electricity is useful in all cases of weakness or emaciation of the muscles, as well as in cases of true paralysis; it is also indispensable in many other diseases. In cases requiring lengthened treatment, it will be often desirable to provide the patient with the proper apparatus and instruct him how to use it in his own home. Expensive instruments are not necessary, but they must be of good workmanship, and the best materials only must be used in their manufacture. There is no single therapeutic agent so useful as electricity in paralysis, it will often help a sufferer on the road to recovery when everything else has failed.

LOCOMOTOR ATAXY.

(*Tabes Dorsalis—Grey Degeneration.*)

(*Sclerosis of the Posterior Root-Zones of the Cord.*)

The symptoms of this chronic disease may be divided into three stages. In the first, or pre-ataxic stage, the patient will complain of shooting, lancinating pains in the lower limbs; he will compare these pains to those caused by electric shocks. There will also be some loss of power in the nerves of the eye, disordered vision, with paroxysms of neuralgic pain.

The sufferer may complain of a feeling of constriction round the waist, which he thinks is caused by indigestion, or a pain between the shoulders and spine, or of a dull back-ache. Other events will occur such as anaphrodisia, bladder troubles, rectal neuralgic pains, or a sense of fatigue in the muscles of the lower limbs after any exertion: impairment in vision in some cases occurs early, it may end in atrophy of the optic nerve. There may arise a difficulty of speech from paralysis of the facial nerve. All these symptoms are liable to occur in the first stage, that is, they may precede the development of ataxia. The pains which occur in the pre-ataxic stage are frequently mistaken for rheumatism, they often come on at night and may be aggravated by damp or cold weather, they appear and disappear rapidly and

move suddenly from one place to another. These pains should never be disregarded, they may shoot through the soles of the feet, the heels, the inner part of the legs, the knees, and the thighs. The pains are usually worse in wet and damp weather, particularly in the east winds which we often have in March and April. The patient walks in a shuffling and uncertain manner, he complains that the ground feels as if it were covered with fur, or a padded cushion, or he feels as if he were walking in the air, the eyes are directed to the feet and ground in walking, there may be inability to walk with the eyes closed.

The ataxia is generally first manifested in the legs, one limb is sometimes affected before the other, the left leg is often attacked first, the individual totters, and is eventually unable to walk at all without support, the legs are thrown forward with a quick jerking movement, the feet brought to the ground with force and are liable to strike against each other, but even then the patient is sometimes able to walk for some distance.

The sufferer from locomotor ataxy is quite unable to walk if he closes his eyes, if he attempts to do so, he reels and would fall if not supported. At this stage of the disease irritability of temper and loss of memory sometimes occurs, the patient is timid, and disconcerted by any unusual noise, he is often worried and anxious looking, and feels unusually nervous; double vision will come on from paralysis of the

ocular muscles, the knee phenomenon will be entirely absent on each side, and the Argyll-Robertson symptom will be present. The sufferer from this disease will find considerable difficulty in getting up from a chair, and he generally has to make many attempts to do so. Numbness is frequently present at this stage, especially in the feet and legs, it often proceeds upwards as far as the hips or back. Anæsthesia or Analgesia is often noticed at this period, and as the disease advances it becomes more pronounced, and will sometimes spread even to the trunk or upper extremities.

After an interval of some months or years, the second stage sets in with a difficulty of standing or walking with steadiness, the legs will be thrown out with jerks, and the body is sometimes swayed from side to side in the attempt to maintain an equilibrium. The gait is uncertain, irregular, and grotesque.

The third stage now follows. The symptoms become more marked, the loss of power becomes more general, the pain in the legs worse, the unsteadiness of gait is peculiar, the sufferer walks nervously and hurriedly, the muscles gradually waste, and ultimately paralysis occurs. This disease usually progresses very slowly, and often appears to remain at a standstill for months, or even years.

In an advanced stage of ataxy, paralysis is added to the other symptoms, the muscles waste, the patient falls into a weak state, he is woe-begone and full of trouble. About this period skin eruptions often

occur, especially herpes, eczema, or urticaria, also the joints are liable to become affected, they get cold and puffy, and a soft swelling of gradual growth occurs, or the knees and shoulders may be seized suddenly with effusion or water in the joints, this denotes that the disease has extended to the lateral columns of the cord.

Faradisation of the muscles of the legs and thighs appears to give great relief to the pains. Some sufferers from ataxy will find relief from a bath composed of three or four ounces of sulphurated potash mixed with thirty gallons of water either warm or cold, according to the feelings of the patient. The spine and limbs should be thoroughly rubbed while in the bath. If possible the invalid should take driving exercise in preference to walking, he should keep in an equable temperature, and be protected from cold winds. A good and generous diet should be recommended, the food must be nutritious and easily digestible; a moderate amount of good wine may be allowed.

Case.—A gentleman, æt. 41, consulted me. The patient was tall, spare, dark haired, dark eyed; in his past personal history the most notable events were indigestion, and stray attacks of deranged liver. He told me he had been to Aix-la-Chapelle, where he remained for two months, and during that time he had over fifty inunctions without the slightest benefit. He complained of a sensation like a tight rope tied round the chest, which he considered was dyspepsia, and in this opinion he was confirmed by his medical adviser. He complained of numb-

ness and tingling in his limbs, also of feeling very sick and weak; he eventually lost all feeling in the legs and feet, there was very little control over the bladder and he suffered severe pains in the stomach, and nearly always had a feeling as though he wanted to relieve the bowels, he suffered much from neuralgia in the legs, and dull pains in the back.

After being under the care of his own medical adviser he gradually got better and partly regained the use of his legs, being able to stand up, and walk very badly holding on to the back of a chair for support.

Having left off the treatment all the before-mentioned symptoms returned with greater severity, and he now complains of tingling pains in the legs, the knee phenomenon (Westphal's symptom) was entirely absent on each side, he had the ataxic gait, and could only walk when his eyes were directed to the feet and ground.

He was advised to take a sulphurated potash bath, composed of four ounces of sulphurate of potash in thirty gallons of warm water. One of these baths were directed to be taken twice a week.

A current of five milliampères from a Leclanché battery was applied to the spinal cord for five minutes every other day. He improved considerably under the use of the liquid extract of ergot, which he was directed to take three times a day, the lightening pains gradually lessened, he was able to walk better, and this improvement was maintained, the disease ultimately being entirely removed.

This affection is more prevalent in men than in women, it is often brought on by excessive muscular exertion, or from exposure to cold or wet, if it arises from this cause the parts affected will be subject to rheumatic pains, and the disease will often come on with muscular twitching and cramps. In many cases the complaint is undoubtedly hereditary. It is,

moreover, if not properly treated, generally progressive. It may follow rheumatism, epilepsy, hysteria, gout, syphilis, or various other affections.

Case.—In the following histories the failure of nerve power was the most conspicuous symptom. A gentleman from the North consulted me for an affection that was termed spinal sclerosis, it began with sharp electric-like pains in the legs, with a burning in the soles of the feet, numbness then came on, and a feeling of “pins and needles”; his gait was changed, he had double vision, he also suffered from dyspepsia and other stomach troubles: in walking the leg was jerked forward, the heel came down suddenly, and the sole followed. He also suffered from genital troubles and aspermatism. As the disease advanced there was an aggravation of all his symptoms. This complaint was brought on by exposure to cold and damp, and also probably by an excessive use of alcoholic liquors.

The disease was beyond doubt locomotor ataxy. I applied, with good result, the constant galvanic current of eight milliamperes from a Leclanché battery to the spine and spinal nerves (a stable spinal-cord-nerve current). The pains in the limbs ceased, walking rapidly improved, ergotine was administered, and afterwards manganese, with the effect of entirely curing the disease.

It has been recommended to apply the actual cautery to the spinal column, but I cannot recommend it: other physicians have advised stretching the sciatic nerves.

Case.—The following will illustrate the nature and treatment of Locomotor Ataxy. The patient, a man over 40 years of age, complained of peculiar pains in the legs, the pains darted up the thighs, there was wasting of the muscles, the pains were aggravated by damp and cold weather,

they sometimes appeared and disappeared rapidly, they were inconstant and erratic, the patient was timid while crossing the street, he was anxious looking and full of complaints, the left leg was more affected than the right. The complaint was brought on by dissipation and other bad habits, there was no doubt about the true nature of the disease, the absence of power in the legs and the peculiar gait, the leg being thrown out violently, all pointed to locomotor ataxy; some forms of syphilitic disease of the brain resemble this affection, but in this instance it was undoubtedly a case of degeneration and disintegration of the posterior columns of the spinal cord, and of the roots of the spinal nerves. Ergotine was prescribed, and later on chloride of gold in combination with lupulin. Faradisation was applied to the muscles of the leg every other day, also a spinal-cord-plexus current was advised. Quiet and rest was enjoined, with nutritious food, and a moderate quantity of madeira was recommended.

This gentleman desired to continue the treatment at his own residence in the country, I therefore furnished him with an induction apparatus, and instructed him in the use of the same. He afterwards informed me that the pains in the legs were much better, and altogether his condition was greatly improved.

The administration of the chloride of barium $\text{BaCl}_2 \cdot 2\text{H}_2\text{O}$ is sometimes beneficial, but it should be given with caution. If the pains are severe, they may be relieved by rubbing with chloroform and warm olive oil, or galvanisation of the hyperæsthetic parts (the stable anode should be applied). Some patients will obtain relief by applying a hot iron to the painful points. If the invalid is troubled with bladder weakness, faradisation will be useful. The

sufferer should wear warm clothing, and flannel next the skin. A distinguished London physician has lately recommended nerve vibration in this affection. Electricity is beyond doubt the most valuable remedy, and the constant current is the most efficacious ; an ascending current is to be preferred, both electrodes being placed on the vertebral column, one in the lumbar region, the other at the nucha.

Locomotor ataxy is a chronic disease of the spinal cord, occurring usually in persons of a nervous temperament, especially if the nature of their occupation exposes them to severe bodily and mental exertion, or if they are obliged to expose themselves to cold and wet, or if they lead irregular lives, or contract any specific disease. There is no doubt that sudden fright, anxiety, or other emotional disturbance, may act as the exciting cause in a person predisposed to this complaint. The connection between this affection and syphilis is well known ; it is one of the tertiary manifestations of the disease. Libidinous excess and aspermatism have also been considered one of the principal exciting causes, as the disease often appears after great excesses have been indulged in.

There is apparently an absolutely and relatively large percentage of tabetics who have been syphilitic ; their number is notably larger than a few years ago was generally suspected. The precise relation which syphilis bears to a subsequent tabes is not known ; probably it acts only as a debilitating, disposing

factor, like many other agencies; but possibly in a certain number of cases syphilis may be the direct cause of tabes. However that may be, it is hardly possible that syphilis can be considered as the sole, or even as the most frequent and important, cause of tabes. Those cases of tabes which are preceded by syphilis exhibit no constant and characteristic symptoms, and in their course are not to be distinguished from other (non-syphilitic) cases. Neither is there any marked or characteristic difference shown in the two cases as to prognosis and treatment. Under certain circumstances, cases of tabes with syphilitic antecedents may improve as well without antisiphilitic treatment as under it, may even become quite cured. Although for some years past this question of the etiology of tabes has been much investigated, no definite solution has been arrived at; nor is it yet determined whether any essential practical gain as regards the treatment of the disease has ensued from such inquiries.

Case.—The following is interesting and instructive. Mr. — was desirous of placing himself under my treatment, as an eminent provincial physician had advised him to do so. He was a middle-aged man. He first noticed a slight uncertainty of gait, then pains of a lightning-like character appeared in the legs and thighs; he was easily tired, and complained of a feeling of fatigue on slight exertion; he was often troubled with what he called the “fidgets”; that is, he was obliged constantly to change the position of his legs. He also complained of numbness and tingling of his feet. After a time the disease

advanced, and all the symptoms became exaggerated. The pain now consisted of dartings and shootings in different parts; sometimes darting through the body and spine, especially the lower part of the back. These increased, and the paroxysms became more frequent; he was also troubled with bladder weakness. The nutrition of the muscles became impaired; they began to waste rapidly. At this time he also suffered from vertigo; his gait now became more characteristic: he directed his eyes to the ground while walking, without doing so he feared he would fall; walking now caused great fatigue. He now began to fear the ataxy would appear in his arms. He always felt better in summer. The ataxia had now lasted three years. His medical man told him he was suffering from degeneration of the spinal cord, and probably thickening of the interstitial tissue. I advised a trial of electricity, and, with the sanction of his physician, I applied the ascending current to the vertebral column. The positive pole was fixed in the lumbar region, and the negative was moved slowly along the course of the spinal nerves; only a very weak current of three milliampères was passed for five minutes daily. In this case a labile spinal-cord-root current was used. A great improvement was obtained after three sittings, the pain became less, and ultimately disappeared. After two weeks' treatment his gait became more natural; in one month he was altogether in a fair way of recovery. His muscles improved in strength; the bladder troubles left him. I then advised him to take some pills of chloride of gold and sodium. This completed his recovery.

One physician in the north had recommended nitrate of silver, but it did not relieve the symptoms, and discoloured his skin. This remedy is often prescribed for ataxia, but I have seldom known it to do

any good. I never use it myself, as I have more confidence in other treatment. Neither strychnia or brucia should be administered, as they usually do harm, by increasing the irritability of the spinal cord. I have often known patients made worse by these medicines.

Case.—The following letter was sent me by a lady in the West of England:—

My husband is suffering from Locomotor Ataxy combined with an affection of the eyes, his age is 52. These diseases have gradually crept upon him within the past seven years, the first symptoms commenced in his eyes, he saw everything double; but that has now passed away, and he can read fairly well. He was able to walk with the assistance of two men until the last six weeks, when his legs gave way, and are now becoming powerless. In times past his sufferings have been very great, sharp, lightning pains darting out here and there, in all parts; he also complains of a sensation over his stomach as if a rope was tied tightly around it; he has also had attacks of vomiting, and suffers from dyspepsia, his knee joints have become very much enlarged, as our doctor says from water being in the joints.

Can you entertain the slightest hope of curing him if placed under your treatment.

This gentleman ultimately came under my care, and I treated him with current electricity.

I applied the galvanic current from 10 to 14 Leclanché cells with the most happy results, the positive pole being placed on the upper part of the neck, and the negative on the lower part of the spine; on the right side ten cells were used, but on the left six were sufficient.

Constitutional remedies were used in conjunction with electricity; an approximate cure was the result.

For other illustrative cases refer to the chapter on Electricity, pages 133 and 135.

The prognosis of this affection was, in former years, undoubtedly grave, but by persistently following out the treatment that of late years has proved so successful, the disease may frequently be arrested, and in many instances approximate recovery may take place.

In many of the phases of paralysis, especially in those of a progressive character, it is important that especial emphasis should be laid on the electrical treatment.

In order to achieve the best results, both currents must be used, and the applications directed to the nerve centres as well as to the affected muscles. Our increasing knowledge of the possibilities of electro-therapeutics enables us to give a favourable prognosis in this affection. In the case I have just related, the patient was descended from a family saturated with rheumatism and gout.

Under the use of the gold and sodium, and sometimes with the aid of ergotine, or salicine, I have repeatedly seen the electric-like pains diminish in violence, and even disappear altogether. I sometimes advise a sulphur bath if the pains are very severe, it is very efficacious. The patient should have fresh air, either sea or mountain air. He must avoid cold and damp, and should wear flannel next the skin. The severe pains may be relieved by rubbing the part with

a liniment of chloroform, belladonna, and aconite. In nearly all cases the primary galvanic current should be applied to the spinal nerves in the manner before recommended. A spinal-cord-root current is the most efficacious.

This disease is more often brought on from cold than from any other cause; cold in the spinal cord manifests itself in congestion, and if the colds are repeated the congestion becomes fixed, and this condition will in time turn to the affection which is known as posterior spinal sclerosis, or locomotor ataxy. Damp and cold climates favour its development; it is often complicated with neuralgia and anæsthesia.

If severe pains come on suddenly in the heels and legs, a scalded seaweed may be applied with great advantage, and warm sea-water baths will be of much benefit.

DISSEMINATED SCLEROSIS OF THE BRAIN AND SPINAL CORD.

(Insular or Multiple Sclerosis—Charcot's Disease.)

This remarkable affection commences with some loss of power, which is soon evidenced by the difficulty in walking, and more especially in the ascent or descent of stairs. The inability to raise the legs is seen by the patient's stumbling up a step, or even over a stone in the street. This disease was first accurately described by the French physicians, and especially by Dr. Charcot, the eminent physician to La Salpêtrière. It is of extreme interest, as it arises from a degeneration of the cord of an obscure origin, and is caused by patches of deposit in the cerebro-spinal centres, and these patches are disseminated through certain portions of the cord.

This disease may commence either in the brain or in the spinal cord; it usually first manifests itself by more or less weakness in the legs. The first symptoms consist of numbness, tingling, "pins and needles," pains in the legs, and other paræsthesiæ;

these symptoms are often accompanied by attacks of giddiness, and frequently by vomiting. The paralysis usually begins in one leg and extends to the other, and subsequently to the arms and fingers. The walk is uncertain and titubating, like that of a person slightly intoxicated, and in this respect the disease resembles locomotor ataxy, in fact it is often mistaken for it ; but the most remarkable symptom in insular sclerosis is the muscular tremor which comes on exclusively during voluntary movements, and disappears during repose.

This remarkable tremor is indicative of loss of power, and is often seen in the limbs, the tongue, and the eyeball, it is then termed nystagmus. The eyes are constantly rolling from side to side, but nystagmus is also met with in other affections of the nervous system. This disease usually comes on gradually and insidiously, it is sometimes hereditary, and usually makes its appearance during the second and third decades of life ; it may be caused by undue exposure to cold or damp, or by excessive mental application, or by dissipation or bad habits, or sometimes by blows on the spine, concussions, &c. This disease undoubtedly tends to weaken the vital powers, and means must be taken to restore the integrity of the spinal cord. When this affection commences in the brain, certain "head symptoms" will appear, such as vertigo, headache, impairment of speech or hearing, then a sensation of numbness of the ends of the fingers and toes, and sometimes shooting pains, like

electric shocks, are experienced in the extremities. When the sclerosis begins in the brain, the characteristic tremor precedes the paralysis, but when the lesion appears primarily in the spinal cord paralysis is noticed before the tremor. If the patient attempts to carry a glass of water to his lips the arm is at once seized with tremor, and in severe cases the contents of the glass are spilt in all directions. He is unable to button his clothes, as the fingers are weak and tremulous; as the disease progresses the next stage commences, the legs become stiff, and the patient is unable to walk; he takes to his bed, the legs are stretched out, and become absolutely rigid, but occasionally they become bent up. Medicines which act specifically on the nerve centres are the most useful in this complaint. Physostigma is of occasional service; conium or hyoscyamus will usually relieve the tremor; and canabis indica has enjoyed great popularity in the treatment of this disease. In the early stages of this affection sulphur baths may be recommended, and the superdiastasic malt extract may be given in moderate quantities. Perseverance with the treatment will be necessary, remembering always a "*maladie chronique il faut un traitement chronique.*"

Case.—This is a typical one of disseminated sclerosis. Mr.—, æt. 28, tall, dark hair and eyes, consulted me, complaining of a peculiarity in the action of his right leg, which was very feeble, the limb moved stiffly and appeared clumsy, so that he could not walk, as his legs could

scarcely support him, and appeared to be trembling under him. The right arm was also very weak, and when asked to raise a glass trembling came on, so that he nearly upset all the water before it reached his lips, this trembling movement commenced some months ago. He was unable to button his clothes or to pick up a pin. His eyesight was misty, and the eyes are constantly rolling from side to side; he was somewhat depressed, and thought he should not recover. This disease was caused by patches of sclerosis in the brain and spinal cord. A galvanic current generated from fourteen cells of a Léclanché battery was applied to the region of the spinal cord, especially to the cervical vertebræ, with good effect.

LATERAL SPINAL SCLEROSIS.

(*Spastic or Spasmodic Paralysis.*)

This is an affection characterised by weakness of either the upper or lower limbs, combined with stiffness and tremors, and often with spasmodic contractions of the partially paralysed muscles.

The disease commences with loss of power in the muscles, and after a short space of time wasting occurs, and ultimately paralysis. The most remarkable feature of this affection is the tendency to contractures, so that the joints are liable to become fixed. The tendons of the hands are often affected, the fingers being drawn up so that their ends press into the palms, and the hand is sometimes bent upon the arm, in some cases the arm is fixed to the side. When the legs are affected, a peculiar kind of tremor is sometimes seen in them, and the patient often experiences a severe pain in the limb, and numbness is frequently present. The legs become rigid when he attempts to walk, and then are agitated by tremors, so that the patient is unable to go any distance. The disease sometimes affects the muscles of the neck, and the head then becomes fixed and immovable. It then may extend to the tongue, which becomes shrunk and wrinkled, and induces a difficulty in swallowing and in speaking.

This chronic disease is often caused by exposure to cold and damp, it may be brought on by dissipation or overexertion, it has been known to follow a debauch, and excessive smoking and undue indulgence in alcohol has been considered by some physicians to predispose to this affection. The treatment of this disease may be conducted on the same principle as that recommended for locomotor ataxy. I have succeeded in arresting the course of this disease in many cases, but in some instances patients delay so long to seek medical advice, that the disease has already progressed to such an extent that lengthened treatment may be required.

I usually recommend the continuous current to be applied to the spine, the galvanic current of from 14 to 20 cells from a chloride of silver battery can be used daily with great advantage.

SCLEROSIS OF THE COLUMNS OF GOLL.

(Ascending Degeneration of the Spinal Cord.)

This is a remarkable disease of the human system of extreme rarity, the essential lesions of which are of an ascending character, and affect the nervous substances of the spinal cord. The symptoms of this neurosis very much resemble those of locomotor ataxy (see p. 60) and the two diseases are often associated and complicated with each other. The first symptom is gradual loss of power in the lower limbs, the patient then experiences sensations of numbness, or of "pins and needles," together with a feeling of heat in the legs and feet, and occasionally followed by deep-seated pains; there will probably be also pains in the loins, and a sense of tightness round the chest. This neurosis usually commences in the lower part of the spinal cord and proceeds upwards to the cervical region. It is thought by some physicians that this disease often precedes ataxy, and in some cases it is difficult to distinguish between the two complaints. The pains in the limbs are less in disease of the columns of Goll than in tabes dorsalis, there is also an absence of ocular trouble and of vertigo. The treatment will be essentially the same as in ataxy.

GLOSSO-LABIO-LARYNGEAL PARALYSIS.

(Chronic Bulbar Paralysis.)

This remarkable disease sometimes commences with certain premonitory symptoms, such as a slight difficulty of articulation, and a loss of power in the lips. After a short time there is some difficulty in protruding the tongue, then the patient finds he cannot pronounce certain consonants. The next symptom is a difficulty of swallowing, the expression of the face then becomes altered, the mouth is generally open, and a glairy stream of saliva trickles from either side of the mouth.

This disease is really, as its name implies, a paralysis of the lips, mouth, tongue, and windpipe, and therefore the functions of eating, swallowing, and talking are much interfered with.

This affection may commence either suddenly or insidiously ; the disease is undoubtedly a progressive one, and steadily advances. The physical powers of the individual then fail, he becomes unable to walk, he suffers from general debility because he is unable to take sufficient food, for experience has taught him that danger attends every attempt at swallowing, and fluids are sometimes regurgitated through the

nose. This disease sometimes comes on from mental worry, or may follow a blow on the head or neck, or it may be due to syphilis or rheumatism.

Galvanism of the cervical sympathetic is useful ; this may be effected by placing the anode over the cervical vertebræ, and the cathode may be gently passed over the lateral surface of the larynx, the tongue and lips may also be subjected to the voltaic current.

INFLAMMATION OF THE NERVES.

(*Neuritis—Neural Paralysis.*)

The nerves, like the brain and spinal cord, are often attacked with chronic inflammation. The symptoms are weakness of the limb, associated with pain and some degree of wasting; there is also disturbance of the functions of the nerve, such as hyperæsthesia, anæsthesia, or paræsthesia; then the results are motor paralysis and muscular atrophy. The nerves of the arms and legs are very liable to be attacked with inflammation of an idiopathic origin; the affection exhibits a tendency to ascend, and to involve other nerves in the neuritis.

Case.—The following is an example of inflammation of the brachial nerves. Mrs. —, æt. 53, for some months had suffered from pain in the upper part of the left arm, which had also become very weak, and the muscles somewhat wasted, and softer than the right. She also complained of a strange feeling down the arm, and numbness of the fingers, which were rather stiff in the morning, she was unable to grasp anything, there was also some stiffness and pain in the shoulder. These troubles were evidently caused by chronic inflammation of the nerves supplying the muscles of the arm. The induced current was applied, which caused good contraction, and the

improvement was marked though gradual. The patient persisted in the treatment for one month, by which time she had quite recovered the use of the arm and resumed her usual occupation. The treatment was assisted by the use of tonic remedies.

In atrophy arising from nerve derangement, the wasting may extend to all the muscles of the limb; which may at last become completely powerless. As regards the treatment of these cases, it is both constitutional and local.

SHAKING PALSY.

(*Paralysis Agitans—Parkinson's Disease.*)

This affection is called by the French “Tremblement sénile.”

Trembling palsy, as it is called, is a chronic nervous disease; it may arise from mental worry, or from long continued muscular exertion, or from any exhausting disease. It may follow typhus or typhoid fever, or it may come on after a blow, fall, or from an injury.

This disease usually begins in the fingers, the hand is next attacked, and afterwards the arm; after a time the legs become affected, and ultimately the head. The sufferer is in a state of constant movement, and when he attempts to walk he is often obliged to clutch at the nearest chair to avoid falling.

The voice becomes weak, and he is greatly fatigued by the constant muscular movements; he often suffers from cramp. This disease may terminate in death through exhaustion, or other complaints may carry off the patient, such as apoplexy or some other brain affection.

After suffering for many years, the invalid is finally obliged to take to his bed, and he gradually sinks from exhaustion.

The course of this disease is undoubtedly progressive, often very gradual, and the individual may live for many years after the appearance of the shaking.

Case.—I subjoin two illustrative examples of this remarkable affection. A man, over 50 years of age, was placed under my care. The trembling began some months before in one arm; from the first there was muscular weakness, the tremor ceased during sleep; the shaking afterwards attacked the leg on the opposite side, his voice was weak, the movements were more pronounced in the upper extremity, he was nervous and depressed, and was greatly fatigued from the violence of muscular movements. I prescribed a course of chloride of gold, and afterwards manganese, with the application of the continuous current to the spine and to the spinal nerves, also to the sympathetic nerve, faradisation was used to the affected muscles. By this means the progress of the disease was arrested; the patient was then advised change of air to the sea-side; by perseverance with the treatment he was entirely cured. This complaint was brought on by emotional disturbance, combined with excessive physical exertion.

Case.—Mr. —, æt. 65, consulted me by letter. He writes:—I am suffering from trembling of the right arm, with wasting of the muscles, and great weakness. The muscles appear to be in a state of perpetual motion, they twitch and quiver constantly. I feel giddy at times. I have a numbness in the legs, and a feeling of "pins and needles." I am always winking my eyes; the least excitement makes me worse; my speech is occasionally impaired. I gave him cannabis indica, with ergotine, and advised a

local application to the affected muscles. The patient's progress was as follows:—On the seventh day he felt stronger; on the twelfth he was considerably better; in one month he went to his employment, and has since continued well. This was a case of functional nervous affection of the spinal cord, and was not due to organic disease; it was caused by increased excitability of the nervous centres, and deranged nutrition of the nerve cells.

The most useful remedies in this complaint are ergotine and belladonna, or hyoscyamus; chloride of barium has been advised by some physicians, the bromides are undoubtedly useful in many cases. The interrupted current may be applied with advantage to the affected muscles: sometimes sulphuret of potassium baths will be of service, and occasionally dry cups may be applied to the spine. Chloride of gold has been recommended by French physicians, as it frequently appears to calm the tremor, and lessen the rigidity of the muscles; I have used it on several occasions, and can speak favourably of it.

Central galvanisation will be of great service in this complaint; the current must be applied to the spine, and also to the sympathetic nerve. This affection is often associated with spasmodic muscular contractions, and sometimes with neuralgic pains.

WASTING PALSY.

(Progressive Muscular Atrophy.)

This peculiar disease is also termed “Creeping Palsy.” It usually begins in one of the arms, or in one of the thumbs; the muscles of the arm become atrophied, and then it extends to the shoulder. The muscles of the other arm are apt to become similarly affected. The disease then extends over the whole of the muscular system. The lower limbs become affected. The wasting of the muscles gives rise to a peculiar withered look in the parts affected. Occasionally rheumatic pains are complained of, and there is a great sensitiveness to cold.

Pain or soreness precedes or accompanies this affection in a great proportion of cases. The first evidence of trouble is weakness in the muscles arising from the atrophy. There is often quivering movements of the affected muscles. The progress of this disease is slow; it more or less slowly increases until the muscles of the trunk become affected. Like many of these diseases, it is sometimes attributed to the action of cold.

Case.—The subjoined is an example of Progressive Muscular Atrophy. Mrs. M—— wrote to me as follows:—Can you do anything for me under the following circumstances: the

muscles of my thumb and right hand are much wasted and very weak. I have occasionally pain in the shoulder, there is a feeling of crawling in the skin. I fear my hands will become useless as the loss of power increases; one doctor told me that I should be paralysed, as the disease was atrophy; another said it was chronic rheumatism; the complaint now appears to be extending to the neck and muscles of the face. Under these circumstances I requested the patient to call and have an interview with me. On examination I found the case was one of progressive muscular atrophy, but as there was no hereditary predisposition to nervous affections I held out hopes of a cure. A galvanic current of twenty cells was applied to the cervical vertebræ and faradisation to the affected muscles. The disease was brought on by a fall, which greatly injured the nerves. Massage was employed every day. The induction current should be used so that all the affected muscles shall be excited.

Case.—The following is a well-marked case of Muscular Atrophy. Mrs. —, æt. 37, wife of a tradesman, had assisted her husband in business, which, together with the attention she gave to her household affairs, caused her much worry and anxiety; she was considerably overworked. The disease commenced with pain and stiffness in the loins and legs. She complained of a feeling of lassitude, and experienced great fatigue after walking. There was a tingling and formication of the feet and legs. The muscles of the legs became soft and flabby, and they were rapidly wasting; she could scarcely walk at all. She was compelled to leave off all work, and was unable to attend to her household duties. The exciting cause of this attack was undoubtedly undue muscular exertion. The patient began to fear the disease would extend to the arms, as she occasionally felt pains, and “pins and needles” sensations in the hands and arms.

I advised change of air and good diet, a moderate amount of wine, a warm bath twice a week, two ounces of sulphuret of potassium was to be thrown into the bath, and the patient was to remain in five minutes only, the temperature was to be 92° Fahrenheit. The treatment consisted of the application of the constant current to the spine (a spinal-cord-nerve current), and faradisation to the wasted muscles. The progress of the disease was soon checked, the wasted muscles improved in strength, and after a time regained their former size. Shampooing and friction was also advised, and a course of phosphorus completed the cure. The disease in this case having been caused by overwork: rest, change of air, warm stimulating baths, and the application of electricity in two different forms alternately, proved successful in effecting a cure. If there is any hereditary tendency, the case is more obstinate, and will take a much longer time to remove. Sometimes the disease comes on after an attack of epileptic fits.

The French physicians use iodide of gold in doses of gr. $\frac{1}{15}$ twice a day; they consider it the best remedy for this affection, but I prefer the chloride of gold combined with sodium, or in some cases salicine.

Progressive muscular atrophy is often benefited by warm sulphur baths and the administration of water at Aix-la-Chapelle in Germany or Aix-les-Bains in Savoy.

There is no remedy so valuable as galvanism in this complaint, the constant current is more efficient than the interrupted, but often both should be applied. Shampooing and friction are also to be recommended. Change of air, especially to the sea-side, is very beneficial, together with warm sea-water douches. A short course of phosphorus, or what is still better, the phosphide of zinc, is often of great service here, it imparts strength to the weakened muscles and nerves. If the disease is a secondary manifestation of syphilis, of course the treatment is obvious.

The less the nervous system is taxed the better, anxiety and emotional excitement must be avoided if possible, undue muscular exertion should be discouraged, and the stomach must not be offended by indigestible food. Good air and good nourishment and sufficient rest are essential; the patient must persevere steadily with the treatment recommended, remembering always that a "*longue maladie, longue traitement.*"

SCRIVENER'S PALSY, OR WRITER'S CRAMP.

(Professional Cramp.)

This interesting affection is also known as "Telegrapher's Paralysis" and "Dancer's Cramp." It arises from the overstraining of certain groups of muscles. The tired sensation is first felt in the muscles of the hand, arm, and shoulder. The patient suffers from sharp pains which run from the hand up the arm, while dull pains are experienced in the ball of the thumb, the fingers, and the wrist. A tired feeling is first felt in the affected muscles, then trembling comes on. If he perseveres in his occupation the disease increases, and the ability to direct the pen is lost. In some cases there is pain in the fingers, with distinct spasm of the muscles, and the spasm is worse if he is particularly anxious to do his best.

In some cases of this kind there are symptoms of nervous derangement, such as headache, pain in the back, and occasionally tremors in the limbs. It is necessary in this disease to direct the treatment to the restoration of the paralysed muscles. The constant galvanic current has proved the most effectual agent in my hands, each muscle must be separately

galvanised, the current must be mild, or it will aggravate the disease. I should apply it also to the sympathetic nerve and the spinal cord in its upper part. It is absolutely necessary that the affected muscles should be rested. It is necessary to apply an ascending stabile or labile current to the vertebral column, as well as to the affected muscles; an increasing spinal-cord-nerve current is very useful in this disease; it should be applied about three times a week.

Recent cases of this affection yield readily to electrical treatment, but when of long standing they are more difficult of cure. The treatment should be both central and peripheral, and if anæsthesia exists it will be necessary to apply the wire brush. No case should be abandoned until both galvanic and faradic treatment has been thoroughly tried, since it is the only method that offers any hope, and the patient should not be discouraged if the symptoms do not immediately yield to the treatment.

LEAD PARALYSIS—PLUMBISM.

(Lead Poisoning.)

Lead palsy is caused by the introduction of lead into the stomach, the air-passages or the skin ; I have known it occur in women from the use of powders and cosmetics to the face containing lead. When it does not actually produce palsy, pains in the limbs and body are often caused by the use of such deleterious articles. The majority of persons affected with this disease are painters, smelters, or white-lead makers.

The symptoms of this complaint are, first, constipation, then attacks of lead-colic come on, with gnawing, twisting pains about the stomach and bowels, this often causes great agony, nausea and vomiting are often present. After these symptoms have lasted some time the patient feels a numbness in his hand, he cannot extend his fingers so freely as formerly, his wrists become weak, and when the disease increases the hands hang helplessly, and he suffers from the condition termed "drop wrist." In some rare cases the palsy extends up the arm ; owing to the disuse of the muscles wasting takes place, the circulation becomes weak, and painful swellings sometimes appear.

In these cases we must use the slowly intermitted

galvanic current, each paralysed muscle must be acted upon every other day. Occasionally the faradic current is preferable, but in very bad cases this will produce no contractions. The patient should drink as much milk as possible.

The upper extremities are more often attacked with this form of palsy; the muscles usually affected are the extensors of the hands and fingers, so that they hang down by their own weight; this affection is sometimes called wrist paralysis. The patient may complain of pain along the spinal column, with numbness and tingling, and in some cases there is anæsthesia. Recovery from this disease is usually slow, but if the proper treatment is persevered with, the muscles will gradually respond to it, and power of movement will be restored to the limbs.

HYSTERICAL PARALYSIS.

(*Hyperæsthesia—Anæsthesia—Paræsthesia.*)

If the muscles of the legs are affected this disease is called "Hysterical Paraplegia," if the muscles of the arms, it is called "Hysterical Hemiplegia." The patient suffers from backache and tenderness all over the spine, with bearing-down pains, irritability of the bladder, neuralgic pains down the thighs. The palsy may attack any of the limbs; but the legs are usually first attacked; there is sometimes loss of sensation in the limbs. The patient will often suffer from aphasia. There will be a fulness or stifling feeling about the heart, and sometimes there is obstinate vomiting; there is general weakness of the limbs, accompanied by tremors.

In many cases the legs are almost completely paralysed, the limbs are rigid and often extended. The patient will probably suffer from constipation and indigestion, with flatulence. The uterine functions are scarcely ever performed in a satisfactory manner. There is usually much pain at the monthly period.

Case.—Menopause Partial Paralysis.—This patient was referred to me by her physician. She was of a highly nervous organisation, over 45 years of age. She complained of

tingling, pricking sensations in the legs, there was a decided loss of power in the lower limbs, so that it was impossible to walk for any distance, she also suffered from neuralgic pains about the loins, the menses had been suspended for four months in consequence of a chill, she was very depressed, and would weep for hours together: she had many vague nervous symptoms, tenderness over the ovarian region, especially on the left side. These conditions indicated not only an irritation, but also a hyperæmia of the spinal cord. Four applications of electricity were sufficient to relieve the neuralgia, and after ten applications the paresis was removed, the improvement was progressive, she afterwards regained full power over the limbs. In this case I used a labile spinal-cord-muscle current of ten milliampères.

Case.—The next is that of a young lady whose parents consulted me by letter.—My daughter's illness commenced with great weakness of the legs, she complains of fatigue on the slightest exertion, the uterine functions are not carried on in a regular manner, she has pains in the back, with nervous irritability and general loss of power, pain occasionally in the back of the neck; all the pains are increased by exertion. She feels weary after slight exercise, and often complains of a feeling of tingling, her hands and feet are cold; if she is not relieved we fear that paralysis will set in, as she can scarcely walk at all. This affection was nervous weakness of the spinal cord, and a suitable treatment was adopted with success. Nerve power is impaired in this affection. A course of zinc phosphide will restore it. I have also found this remedy regulate the menstrual periods, and cure the hysterical symptoms. The dose should be small, and it should be taken continuously for six weeks.

Many physicians recommend ammonii bromidum in this disease, NH_4Br , but it often produces con-

siderable prostration. Electricity is one of the most powerful remedies for this affection which we possess, hyperæsthesia or anæsthesia are both quickly relieved by it, anæsthesia will require the use of the dry electric brush. In hysterical palsy, galvanisation of the spinal cord will be necessary, an ascending current of about twelve milliampères should be used for five minutes every other day.

An attack of hysterical paralysis may supervene without warning, but more usually patients have been exposed to sudden chill, to mental emotion, or to moral or physical shock occurring about the time of the menstrual epoch.

The paresis in these cases is fairly attributable to the exhaustion of nerve power, brought on by excessive menstruation, over-work, anxiety, or excitement, or by any debilitating influences. All causes of exhaustion predispose to this disorder. Our great object in these cases is to restore the condition of the nervous system; this can be done by a bracing air, sufficient rest, a moderate amount of out-door exercise, and a generous diet, with interesting occupation, and freedom from anxiety.

SCIATICA.

(Pain in the district of the Sciatic Nerve.)

This affection commences as a dull, heavy pain, which gradually becomes more and more intense, and is aggravated by muscular exertion. It begins as a soreness after walking, and a dragging or heaviness of the leg and foot: the pain may come on in paroxysms, consisting of twinges or darts shooting down the back of the leg. A person who has once had an attack of sciatica becomes much more liable than others, the nerve remains in an irritable state, and any exposure to cold will bring on a fresh attack. There is sometimes wasting of the muscles of the thigh and leg; this complaint is sometimes mistaken for disease of the spinal cord; any unusual exertion will occasionally bring on an attack. Zinc phosphide, Zn_3P_2 , in combination with extract of nux vomica or lupulin is a very valuable remedy, tincture of gelseminum is also useful in appropriate cases. Electricity is of great service in this complaint, and a judicious course of galvanism will rarely fail to effect a cure; the primary galvanic current is the best agent, the positive pole should be applied over the seat of pain, and the current should be continuous for several minutes. Sedative applications are very useful.

Case.—The following example of sciatica was caused by a strain, and had lasted for some months. Mr. —, about 40 years of age, placed himself under my care, he suffered from severe pain about the thigh, which was increased by muscular exertion, and was sometimes of a darting character, and went through the nerves like an electric shock; at other times it was of a dull, aching nature, he attributed the disease to lifting a heavy weight some time previously. I prescribed some gelseminum, and advised the primary galvanic current; after three applications the pain entirely ceased, and finally the recovery was complete.

Nearly every case of sciatica will be benefited by electricity properly directed, and in most cases a permanent cure will be effected. The ascending current, with stable electrodes, will be the most successful; the anode may be placed over the painful parts, and the cathode over the sacrum, or in other cases the circular current may be used. The current must be mild and continuous, if a strong current is used, great harm will probably be done, and the disease made worse.

I have cured a number of severe cases of sciatica by the aid of electricity, when other means have entirely failed. I usually, however, combine some constitutional treatment with it, but in many cases it will alone suffice to effect a cure.

Dry cupping is most valuable in sciatica, its effect is really striking, it usually gives great and immediate relief, and not unfrequently a permanent cure; after its application the patient can forthwith get up and walk without pain.

NEURALGIA OR TIC DOULOUREUX.

(Neural Hyperæsthesia.)

This is essentially a disease of the nervous system; it is the result of lowered vitality, it takes its origin from debility, rheumatism, or malaria, or from any other disease which produces cachexia; it occurs more often in females than in males, it is often transmitted by hereditary influence. It is caused by intense intellectual exertion, anxiety, mental excitement, exposure to cold and damp, want of amusement, deep grief, constant worry, or any other cause that produces lowered functional activity, or lowered nutrition, hence it is a disease of depressed tone. It is absolutely imperative that the patient should be supported, and that the nutrition of the nervous system should be improved. This painful affection usually occurs in persons of a nervous temperament, it is characterised by violent pain in one of the branches of the fifth nerve, the agony is intense, and at times almost unbearable, it comes on suddenly, and is of a darting, burning or tearing nature, the pain follows the course of the nerve. This disorder sometimes arises from a peculiar irritation at the root of the nerve. The tendency of this affection, if neglected or badly treated, is to become firmly rooted,

Neuralgia or Tic Douloureux.

and to increase in severity; it is the result of lowered functional activity; an unusual expenditure of brain force will bring on an attack. The success achieved by electrification in all painful disorders is remarkable, the pain is frequently relieved in the midst of the application, some cases will require the galvanic current, others the faradic. Besides treatment applied directly to the seat of pain, central electrification will sometimes be required, in order to reach the origin of the disease. The current should be mild, and be made with moistened disk electrodes. I have found the pyrophosphate of iron with dilute phosphoric acid a most valuable remedy in many cases of severe neuralgia. If the patient is anæmic, cod liver oil may be given. *Gelsemium sempervirens* is most useful in facial neuralgia, about 8 or 10 minims of the tincture should be taken, or if that fails *cannabis indica* should be tried; if the disease is produced by malaria, 10 or 20 grains of quinine rarely fails to relieve the paroxysm. Facial neuralgia is more common during adult life, and electricity affords much relief in this disease, it not only removes the particular paroxysm, but permanently cures the disease; the primary galvanic current should be used, the positive pole being placed over the seat of pain. The patient should have salt air, or sometimes mountain air is preferable, with nourishing diet, and occasionally warm sea-water baths. A solution of chloral hydrate may be used as a lotion and applied hot, it will rarely fail to give relief. Properly selected nerve

tonics will seldom fail to complete the cure. I often recommend zinci phosphidi gr. $\frac{1}{10}$. An ointment composed of aconitia is one of the most valuable remedies, in fact, if properly made, I have never known it fail to afford relief, if the aconitine is good the pain must be removed.

In this complaint, or in sciatica, scalded seaweed may be applied to the painful part for ten minutes, it may be sprinkled with ten drops of wine of opium and the same quantity of chloroform: this application will often entirely remove the pain in a few minutes.

Division of the nerve has been advised, it has no doubt occasionally succeeded, but it has failed in most cases; it can only be useful in peripheral neuralgia. This affection is often brought on by fatigue or long fasting, by breathing impure air or by debilitating influence. The treatment must necessarily be directed to re-create nerve power, this can be done by the remedies I have previously mentioned, especially by the use of those that have a special relation to the nervous system.

NEURASTHENIA CEREBRALIS.

(*Functional Weakness of the Brain.—Nervousness.*)

In all functional derangements of the brain the symptoms will vary considerably. Many will complain of numbness and tingling, with sensations of “pins and needles”; others will complain of a tenderness of the scalp, or a feeling of weight in the head, or shooting pains in the muscles and joints, weakness of the limbs, noises in the ears, black specks floating before the eyes, *muscæ volitantes*, palpitation, sleeplessness, the patient becomes fidgetty, the voice is feeble or trembling, he forgets words he wants to use, his heart becomes irritable, and he suffers from nervous dyspepsia, he often flushes, and complains of cold hands and feet, with chills passing down the spine, he arises in the morning unrefreshed from sleep, and frequently with a dull headache, and sometimes he develops a morbid craving for stimulants. Some individuals will suffer from that remarkable emotion called gynophobia, or perhaps to a less extent from anthrophobia. This complaint is caused by exhaustion of the nervous system, excesses of various kinds, emotional disturbance, troubles and anxieties; if not properly treated it will probably end in paralysis. This chronic nervous affection will often cause great mental depression. Phosphide of zinc will be useful

and the nerves must be roused by properly directed galvanic currents, the primary current must be applied to each side of the spinous processes.

Case.—This is a typical one. A patient from the country writes:—I am suffering from want of power in all the limbs, especially in the legs, great lassitude and nervous debility, frequent trembling of the hands, and cramped feeling in the toes, dizziness and extreme nervousness, and when walking the legs feel beyond control.

Scarcely any appetite, curious sensations in the lower jaw, with dryness in the throat, and frequent difficulty in swallowing; great excitability of the nerves, accompanied by anger from the most trivial cause. Strong aversion to society of any sort, great depression of spirits, and frequent despondency. Age 38, fair complexion, slight and tall, of studious habits, taking very little exercise, being unable to do so on account of giddiness and weakness of legs, nervousness, &c.

This condition has existed for about twelve months or more; have a cold bath in the morning, which seems to agree with me; sleep badly, with great lassitude in the morning, especially if rising later than usual.

A person suffering from neurasthenia should take a long holiday, but should not over-exert himself, sea air and warm sea-water baths are useful, two or three glasses of light wine may be taken for dinner. Medicines that improve the condition of the blood must be used, sometimes phosphorous is of value, but it often irritates the stomach, therefore I prefer other remedies.

NEURASTHENIA SPINALIS.

(Functional Weakness of the Spinal Cord.)

IRRITABLE SPINE.—This is a functional weakness of the spinal cord, the patient will complain of back-ache, general loss of power, nervous irritability, exhaustion on slight exertion, feeling of heat and cold passing up the spine, tingling sensations, formication, palpitation of the heart, faceache, pain in the side, hiccough, great weakness of the limbs almost amounting to a slight form of paralysis, stiffness and pain in the muscles, and sometimes bladder troubles, and the sufferer is in constant dread of some serious affection of the spine occurring. He will perhaps suffer from that peculiar abnormal emotion called claustrophobia, or it may be from angoraphobia. This nervous weakness must be distinguished from myelitis and from hyperæmia, as quite a different mode of treatment will be required. Change of air to the sea will be beneficial, or mountain air suits some cases better; central galvanisation will be useful, an ascending stable current of weak strength should be passed through the vertebral column, and massage may be advised; warm sea-water baths are sometimes to be recommended. I have used with great success salicine in this affection, it is useful in those forms of weakness depending on wasting of the spinal cord; it strengthens the spinal nerves and restores power to the muscles, it is one of the most valuable remedies in functional spinal diseases.

VERTIGO OR GIDDINESS

Consists of a transitory sense of whirling round, or of falling. Surrounding objects appear to be in motion. The sufferer loses his balance for a minute or two, but often recovers himself without dropping, provided he can grasp some firm support; or the attack may assume a different form, the patient feels as if he were moving, the kind of motion which is most commonly felt to be present is that of falling or floating away. He will sometimes say he feels as if he were spinning round, or that the room appeared to him as if moving. In more severe attacks he staggers, and grasps some object for support, or his legs sink under him, or he slips forward on to his side.

An individual is said to be "giddy" when he perceives the objects about him to be in a state of motion; when he sees the walls of his room move round, or feels the ground give way, or the seat sink, as he goes to walk or to sit down. Sometimes giddiness is accompanied with nausea, and is increased with every attempt to move.

When giddiness is connected with stomach disorder it sometimes commences with dimness of vision; the patient sees specks floating before his

eyes, objects appear to revolve around him, double vision occurs, he staggers, and sometimes is unable to stand. Giddiness is most prevalent in advanced life, when it occurs frequently it shows there is some disturbance of the nervous system; but it often arises from weakness of the circulation in the brain. It may be due to some poison in the blood, or it will arise from depressed vital power. If the bowels are in a constipated condition, a suitable aperient must be prescribed, to be taken as occasion requires, as it will be necessary to promote the action of the liver and bowels.

This disease often betokens great weakness, or it may be due to an impure state of the blood, or to a morbid condition of the nervous system. It may be induced by some affection of the liver or kidneys, or more frequently of the heart. Disease or weakness of the heart will cause vertigo, or "swimming in the head"; and frequently headache, with great nervous irritability. I never advise the loss of blood in this affection, but dry-cupping to the nape of the neck is often beneficial; I apply the cups twice a week for ten minutes at a time.

A restorative plan of treatment will usually be indicated, with a good nourishing diet; it will also be necessary to attend to the condition of the liver, so that it secretes healthy bile.

Giddiness will often recur if the constitution gets impaired, or the nervous system becomes weakened. The diet may always be nourishing and sufficient in

quantity to satisfy the patient's demands. Sherry and soda-water, or seltzer-water, with a little brandy in it, or claret, mixed with hot water, may be taken for dinner. White fish, mutton, beef, chicken, and game, together with fresh vegetables, bread and butter, and light puddings; these are all unobjectionable articles of diet.

On the contrary the patient must avoid strong ale, raw spirits, sugar, pastry, most salt meats, and indigestible articles of diet, particularly nuts and walnuts.

EXAMPLE.—A clergyman writes as follows:—

I have been subject to giddiness in my head for two or three years, which is now becoming much worse. I have just had a severe attack, and had to grasp something for support, and found myself screaming for help.

When I awoke this morning the room and everything appeared in rapid motion, and that is a frequent occurrence, so much so that I feel afraid to go out. I am single, aged 33, rather nervous, very bilious, pale and sallow complexion.

I have suffered from these giddinesses since the age of 16. I may add that I have always been delicate, but never had to give up my duties. I have been very cheerful and in good spirits; I also live very regularly, and do not take wine, spirits, or beer. I have nearly always a singing noise in my left ear.

About a month after this patient called to thank me for what I had done for him, he afterwards wrote to say he had been wonderfully well, in fact, better than he had ever anticipated.

In this case the affection was brought on by nerve derangement. By careful treatment the giddiness was removed, and the patient restored to a sphere of usefulness.

DERANGEMENTS OF THE LIVER.

(Paresis of the Nerves supplying the Liver.)

There is no doubt that certain forms of partial paralysis, paresis, and nervous disorders are caused by functional derangement of the liver. I will therefore briefly describe the symptoms of that affection.

Functional derangements of the liver are frequently attended by the following symptoms :—

A feeling of weight and fulness in the right side and in the region of the liver.

Flatulent distension of the stomach, and often heartburn.

A feeling of oppression, and aching pains in the limbs.

The patient often complains of sleepiness after meals, with a furred tongue, and a bitter taste in the mouth, especially in the morning.

The appetite varies, sometimes good, at other times very bad.

The bowels are frequently constipated.

Some patients will suffer from palpitation of the heart, others from frontal headache.

Many patients will complain of restlessness at night and bad dreams.

Errors in diet will produce all these symptoms in

persons liable to derangement of the liver. The patient is taught by experience to become more careful as to what he eats or drinks; many articles of diet, especially fat, will produce pain or uneasiness after food, with much distension of the stomach and bowels.

This peculiar derangement of the liver will often cause pain in the shoulder, and sometimes a dull, aching pain about the right side. Severe cramps in the legs are likewise caused by this disease; they often come on in the night, especially in cold and damp weather.

Headache frequently accompanies this disease, it takes the form of a dull, heavy pain in the forehead, and comes on as soon as the patient awakes in the morning, and lasts the greater part of the day, sometimes for several days.

Depression of spirits is commonly associated with this liver derangement, and irritability of temper is another common symptom, and is sometimes the first indication of anything wrong.

The Liver is out of order.—Diseases or disorders of the liver are more frequent than diseases of any other organ of the body.

One man considers he is “bilious” because he has a pain in the right shoulder.

Another because he has a pain in the right hypochondrium.

Another feels confident he is “bilious” because he looks so yellow about the eyes in the morning.

Another one because he is very subject to sick headaches.

Another man is certain he is "subject to bile," because, after a few days' suffering from indigestion, he vomits green bile.

Another patient says his "liver is out of order," because he suffers from flatulence, loss of appetite, and fulness of the stomach after meals.

An itching of the skin is frequently considered a sign of a "torpid liver."

"Deficiency of bile" will cause drowsiness after meals.

Irritation of the liver will often cause disease in other organs, such as the heart and kidneys.

These symptoms are really caused by functional derangement of the liver, and are only to be cured by remedies which have a specific action on that organ.

It is necessary in all cases of paralysis or other nerve affections to pay particular attention to the condition of the liver, and that organ must be put into a healthy condition.

Paralysis sometimes arises from derangements and deficient action of the liver, in which case I pass a mild current of electricity through the liver, the positive pole being placed over that organ, and the negative on the lumbar vertebræ.

OBSERVATIONS ON DIET.

Quite as important for the permanent relief of certain diseases, as medicine itself, is the use of a well regulated and suitable diet. The kind and quality of the food consumed are considerations of consequence in the treatment of a number of complaints.

For any general rule of diet, none can be more definite than the rule of moderation ; the patient may eat as much as he has good reason to believe he can easily digest. He must avoid all things hard, dry, tough, very salt, very sweet. Melted butter, meat pies, and fat meats must especially be avoided. The invalid should be warned to be very moderate with fermented drinks, with salted meats, with pickles and vinegar ; he should take very little sugar, as all these articles are injurious.

In drink the rule of moderation must be yet more rigid. Light wines are more wholesome than the strong. The patient may take one or two glasses of good claret, or a glass or two of sound sherry for dinner, if it appears to agree with him ; if not, a bottle of soda-water or seltzer-water with a table-spoonful of brandy in it.

Provided the food is of a wholesome character, the appetite is the best guide in the selection of a

diet. Good roast or boiled meat, bread, potatoes, green vegetables, and farinaceous puddings made with milk, together with stewed fruits, may be taken with advantage.

Among the different kinds of meat there are great differences; lamb and mutton are more easily digested than beef, and meat that has been kept until it is tender is more easily digested than meat freshly killed.

Most cooked vegetables, also bread, farinacea, potatoes, rice, &c., are soon digested.

It should be noticed that pain and oppression during the digestion of food are signs of imperfect digestion; and if beef or pork be taken by a weak stomach it will refuse to perform its functions properly, and a severe attack of indigestion will be the result. The patient will suffer from headache, flatulence, pain in the stomach, want of sleep, loaded tongue, and other symptoms of disordered digestion. Large quantities of beer or wine will often disturb digestion by producing congestion of the liver and stomach. The invalid should not exceed one or two glasses of wine for dinner, or one glass of bitter ale.

The hours of meals should be established and adhered to with the strictest regularity. The intervals between meals should be at least four hours.

The influence of the mind on the development of disease must not be lost sight of; any mental disturbance tending to depress the nervous system is certain to be followed by injurious consequences, and

therefore, all such influences should be carefully avoided, and the tranquility of the mind as much as possible ensured. Late hours should be shunned, and the mind employed with pleasant thoughts and occupations.

The following diet-table may be recommended to most invalids, but it will of course have to be varied, according to season :—

Breakfast: A large cup of black tea with half milk, or in preference, a breakfast-cupful or two of cocoa prepared from cocoa nibs. Sole or whiting, or the lean of an underdone mutton chop, or a new-laid egg lightly boiled about three minutes and a half, or home-fed bacon, cold chicken or game. Stale bread and a little fresh butter, or dry toast.

Dinner: Codfish, sole, whiting, smelts, turbot, or brill, mutton, venison, chicken, grouse, partridge, hare, pheasant, sweetbread, roast leg of lamb, or roast beef. Stale bread, cauliflower, asparagus, vegetable marrow, French beans, floury potato, or sea-kale. These should be varied from day to day, and occasionally with the addition of fruit or farinaceous puddings. Beverage: Half a tumbler of claret, burgundy, or carlowitz, taken with half a pint of water, or about one table-spoonful of whisky or cognac brandy in a tumbler of cold water. In some cases a glass of good bitter ale will assist digestion, but if it disagrees, one or two glasses of good dry sherry may be taken. A few grapes, an orange, a baked apple or perhaps strawberries after dinner.

Tea: Plain bread and butter, or dry toast, one egg may be taken if desired, two small cups of cocoa prepared from nibs, tea, or milk and water.

Supper (not later than 9 p.m.): Some white fish or a little cold meat, or some cold chicken or game. Beverage: one claret glass of light wine, or one table-spoonful of whisky or cognac brandy with half a pint of cold water.

Avoid rich soups, sauces, nuts, pickles, spices, salted, smoked, dried, potted or otherwise preserved meats, veal, pork, dried fish, lobster, salmon, pies, pastry, or new bread, cheese, jams, raw vegetables, dried fruits, malt liquors, effervescing wines, liqueurs, cyder, and all stimulants, except with food.

Avoid rapid eating, which is one of the most frequent causes of indigestion. The result of rapid eating without thorough mastication is: first, that the food is not sufficiently mixed with the saliva, which is poured into the mouth during the process of mastication, and which is an important aid to digestion; and, second, that the food is swallowed in large masses which are difficult of digestion.

SEA AIR AND SEA BATHING.

Change of air is beneficial in all chronic diseases. Sea air is a powerful restorative agent in every form of nerve disorder with depression, especially if that derangement is associated with indigestion in any of its protean forms.

The primary action of change of air in such cases, consists in improvement of the digestive functions, and this improvement is soon followed by a diminution of nervous irritability. Temporary change of air is useful now and then, by imparting a stimulus which is not to be obtained in any other way. The presence of ozone in sea air in greater proportion than in the air of inland plains is well established. Experience has thoroughly established the fact that where the amount of ozone in the air is constantly high, there we almost invariably find a high degree of salubrity; it purifies the air by destroying injurious gases, and especially by determining the oxidation of decomposing organic substances. It promotes nutrition and blood formation by supplying to the respiratory organs a most active form of oxygen.

Sea air gives new life to the invalid, it revives the

drooping energies, arouses the appetite, soothes the irritability of the nerves, improves the digestion, and produces a buoyancy of spirits.

The climate of Brighton is especially to be recommended in the following complaints:—In all nervous diseases it is particularly serviceable, as it will restore the general tone of the system; in spinal irritation, hysteria, chorea, hypochondriasis, in some cases of chronic softening of the brain and spinal cord, in paralysis of cerebral origin, in certain cases of locomotor ataxy. Chronic Bright's disease of the kidneys and also catarrhal nephritis will be benefited at Brighton. Anæmia, chlorosis and functional debility, scrofula, and all forms of heart disease may be treated successfully here. These symptoms all require a pure air and a bracing atmosphere. In palpitation associated with liver derangement and indigestion, a bracing climate is desirable. In the various forms of chronic indigestion and hepatic disease, in diabetes, and in many other chronic conditions, which I have not space to mention, the climate of Brighton is indicated.

BATHS.

Sea-water baths, either warm or tepid, are valuable adjuncts in the treatment of all chronic derangements ; in many cases, the warm sea-water bath may be recommended with advantage when bathing in the open sea is forbidden. Chronic gout, rheumatism, spinal pain, conditions of blood poisoning, scrofulous complaints, rheumatic joint affections, nervous weakness combined with dyspepsia, flatulence, functional diseases of the nervous system, paralysis, and nervous dyspepsia, inability to sustain mental or bodily efforts ; in addition to these diseases there are many other conditions connected with weakness or atony, in which judicious courses of sea bathing or perhaps warm sea-water baths will assist the climatic element of sea-side residence. The tepid swimming bath of sea water offers the advantages of the combination of one of the most perfect modes of muscular exercise ; it is very useful in appropriate cases.

A spinal douche of warm sea water is valuable in congestion of the internal organs, it arouses the activity of the nerves and blood-vessels of the skin, relieves nerve-depression and removes pain and irritation.

Brighton is the healthiest and most beautiful sea-side town in the kingdom. As a residence for invalids and others requiring rest and change, it has no equal in the world. The climate is bracing and restorative, and is especially beneficial to invalids during the autumn and winter months. Perhaps no place could be named which is more suitable as a residence for children or young persons, or for restoring the health when the vital powers are sluggish. The beneficial effects of sea air are due to its purity, to the equability of its temperature, to the iodine it contains, and to the constant presence of ozone. Change of air is to be recommended in all chronic diseases ; it will serve to ward off complications, to give mental exhilaration, to promote appetite and digestion, and to be the source of tranquil nights. Brighton is fortunate in possessing a supply of water of the purest quality, and practically inexhaustible in quantity. Of the air of Brighton it is scarcely necessary to speak ; its purity and salubrity, its bracing and exhilarating properties, are proverbial. In autumn, when the fall of the leaf mars the pleasures of the country, and London is dismal with fogs, Brighton is almost continuously favoured with a bright sunshine and a cloudless sky. Equability of temperature in winter is one of its valuable characteristics.

THE SCIENCE AND PRACTICE OF MEDICAL ELECTRICITY.

(Galvanism—Voltaism—Faradism—Franklinism.)

The success of electrical treatment in all paralytic and nervous affections will depend on the exercise of judgment in determining the indications in particular cases, and of skill in its employment. The electrical apparatus required in the diagnosis and treatment of disease must be of two kinds, one for furnishing the primary or galvanic current, the other for yielding the induced or faradic current. Experience shows the usefulness of both the galvanic and the faradic current, different cases differing as regards the superiority of the one over the other. Care, however, is to be taken not to employ too strong currents, nor to prolong or repeat unduly their applications. Of remedies having direct reference to paralysis, electricity holds the first rank. Patients frequently say that they have “tried electricity” and it did no good; it is not the remedy, but the manner of using it that determines its value. In electro-therapeutics two currents are used, and there are six different methods of application, and these methods are all capable of indefinite variations, dependent on the skill, taste, or experience of the

electro-therapeutist ; when one mode of application fails another may succeed. The majority of physicians know little more of electro-therapeutics than their patients. Some have a theoretical, but not a practical acquaintance with it ; others understand it, but are too closely occupied to employ it ; they have no apparatus, or if they have any it is very likely out of order. Some physicians say "get a battery and try electricity." They might as well say, get some medicine and try it, without writing the prescription. The temptation on the part of the people to use electricity themselves is very strong, forgetting that it is not electricity that cures disease, but electrification, and not knowing that there are two kinds of electricity in common use, and six different methods of application, every one of which is capable of various modifications, also forgetting that there are certain temperaments that will not bear electricity however applied, and that there are others who must be treated with great skill and caution, and on whom the currents and methods employed must be studiously varied during a course of treatment. In fact, they forget that electricity as a science and art is wonderfully complex and exacting. The patient purchases a battery very likely not suited to his case, pretty soon the metals become corroded, and the current ceases to flow, and the battery is soon consigned to a store closet, where at all events it will do no harm to the patient.

Electricity is useful in the treatment of nearly

every form of paralysis, and in almost all kinds of nervous diseases; in wasting of muscles it is indispensable, also in all affections in which there is loss of power. There are two kinds of electrical apparatus required, one for furnishing the primary or galvanic current, this is called galvanisation, the current must not only be continuous but constant, the currents should be of low tension, and of considerable quantity, this is also known as the voltaic, dynamic, or constant current, the current passes from the positive pole to the negative pole. Strong and painful currents are not desirable, they usually do harm and cannot do any good, we must always be careful never to over-galvanise a patient; some persons imagine that the more powerful the agent the more good it will do them, but mild galvanic currents of from four to twelve milliampères are much more beneficial; all sudden shocks and interruptions of the current must be avoided, labile applications are more stimulating than the stabile, and in some cases are to be preferred, as they increase muscular contraction and generally stimulate the nutrition of a limb.

In spinal diseases, either with or without paralysis, electricity is always useful, the constant current should be applied over the affected part of the cord and spinal nerves; the positive pole or anode must be placed on the nape of the neck, and stroking the skin on each side of the vertebral column with

the cathode, this should be done every other day, and should be continued for about ten minutes.

The other kind of electricity is of considerable value in the restoration of palsied muscles; it is called Faradisation, the induced or interrupted current, sometimes the electric hand will be required, at others a wire brush may be used. If there is any paralysis present, the induced current must be applied to the muscles; in this way their nutrition will be promoted, and any tendency to atrophy obviated; friction and kneading will also have a like effect; by the use of these combined means, that is, both galvanism and faradisation, I have been very successful in curing some serious cases of paralysis. Improvement in these cases takes place gradually, little by little the power returns, the muscles increase in strength, and the whole nutrition of the patient improves. The vital effects of electricity are seen in nerve, muscle, skin, and blood vessel. Another thing that electricity does is to improve, and that most definitely, the nutrition of the parts to which it is applied. You may distinctly increase the bulk of many wasted muscles, even when the cause of that wasting differs. Muscles may waste from disease of the spinal cord, or from division of their nerve, or from degeneration of muscular tissue, or from blood poisoning, or simply from disuse; in all of these cases you may improve the condition of the muscles by electricity. In certain forms of paralysis and wasting, especially in long-standing palsy, the result

of cerebral disease, faradisation will be the most useful. On the other hand, paralysis caused by cold, or facial palsy, will be more rapidly cured by the continuous current. In hysterical paralysis electricity will often be of great use; when the muscles have become flabby, a few applications of a current of moderate strength will speedily restore them, especially if the nerve between the spinal cord and the muscle is not seriously damaged.

If the faradic current is used, the poles are often kept close together, it is seldom advisable to separate them widely; if you separate the poles of a faradic apparatus too widely you probably give the patient pain without doing him any good, and you may upset the circulation in his head.

Shaking movement, tremors, or clonic spasm are best cured by the weak continuous current. In paralysis of the seventh nerve from exposure to cold a metallic brush is most useful.

Neuralgia, sciatica, tic-douloureux are quickly relieved and in most cases permanently cured by the continuous galvanic current, it seldom fails if properly applied. The current should be very mild, and should be applied for a short time only.

I have cured cases of rheumatic gout by the application of central galvanisation, that is, the whole of the cerebro-spinal axis must be brought under the influence of the current. The negative pole must be applied over the sacrum, and the positive pole should be passed along the course of the sympathetic

and pneumogastric nerves; by the same means also lumbago and rheumatic pains are quickly relieved, the anode must be applied to the painful part.

Central galvanisation is also useful in sleeplessness and in neurasthenia, and in many forms of nervous diseases.

The higher susceptibility of women to electrical influence, makes them yield more rapidly than men to the treatment when it suits the temperament and the disease, and hence it is that many of the best results of general faradisation and central galvanisation have been obtained in nervous women.

The object of applying electricity to the body in disease is to improve nutrition, and nutrition is a process of infinite complexity; it is also of value to increase the size of muscles and to relieve pain, these results are the signs of improvement in nutrition.

In applying electricity to any part of the body we improve the nutrition of that part, in applying electricity to the whole body we improve the nutrition of the whole body, or at least of those parts which are directly or indirectly influenced by the current. Faradisation of a healthy muscle makes it grow faster than it would without faradisation, in other words, it produces the same effect it would if the muscles were paralysed; when a muscle is atrophied the improvement in nutrition is more quickly observed and is more rapid than when the same muscle is treated in a physiological condition.

The best results of electrical treatment are

usually obtained with mild currents, electrification sets in motion forces that slowly act and react for hours, and in some temperaments for days after the application has ceased ; as a rule three times a week is sufficiently often for the application of either galvanism or faradism. Both currents can produce contraction in paralysed muscles, and relieve neuralgia and sciatica, and are most efficient aids in the cure of nervous exhaustion, nervous dyspepsia, and all nervous diseases associated with or dependent on general debility.

For hysteria and other allied affections electrical treatment is especially adapted, and its success is most remarkable ; central galvanisation is the method that is usually indicated in this complaint, the sympathetic nerve as well as the pneumogastric and depressor must be brought under the influence of the galvanic current ; the negative pole should be placed at the epigastrium, while the positive is passed by the inner borders of the sterno-cleido-mastoid muscles, from the mastoid fossa to the sternum, thence to the nape of the neck and down the entire length of the spine.

In galvanising the spine, especial attention is given to the cilio-spinal centre, which is to the spine what the cervical centre is to the brain ; the cervical sympathetic, and pneumogastric, as well as the spinal cord are affected by the current, the electrode should also be passed over the entire length of the cord by labile applications up and down.

Electricity in any form when applied to the body acts as a stimulating tonic with a powerful sedative influence, it is an agent for improving nutrition in any condition, local or general, where improvement in nutrition is possible. The order and degree of its effects depend largely on the method and manner of application, and on the constitution of the patient to which the application is made.

The central nervous system is best brought under the direct influence of the galvanic current by the method of central galvanisation, which is the form I usually employ in neurasthenia, and the best results are obtained from it.

Spinal Paresis of many years standing.

A most persistent case of spinal irritation came under my observation through the kindness of the lady's medical attendant, who advised her to try the effect of electrical treatment. The patient was 28 years of age, of unusual intelligence and great strength of will; she suffered from excessive tenderness over the lower portion of the spine, with sleeplessness, dyspepsia, feeble appetite, her strength was much reduced, so that she was unequal to the slightest exertion, she complained of numbness and tingling of the hands and feet, there was also loss of power in the lower limbs, and a decided disposition to paralysis, as manifested by a feeling of weight in the effort of walking. Galvanisation of the sympathetic, together with mild general applications of the faradic current were followed by a marked amelioration of these symptoms, the limbs progressed rapidly, and the spinal tenderness decreased, and after twenty applications ceased altogether.

Chronic Irritation and Hyperæsthesia of the Spinal Cord.

The following case illustrates a chronic condition of irritation and hyperæsthesia of the spinal cord; the patient having decided to try electricity was referred to me. This was a young lady, daughter of a physician. She had suffered for some time from tenderness and irritation of the spinal cord; the menstrual period was delayed for three months, and this was considered to be the cause of the symptoms. She complained of strange sensations in the legs, a crawling, pricking, waving feeling; she had fits of weeping and great despondency; she became excessively nervous. All the usual internal remedies had been tried in vain. She was now placed under my care to be treated by electricity as a *dernier ressort*. I began treatment by a very mild application of a spinal-cord nerve current of six millianpères. She was then submitted to central galvanisation. After three applications the menses appeared. She soon began to improve, and after a dozen applications every unpleasant symptom disappeared, and the patient has since remained perfectly well.

Nervous Exhaustion associated with Menopause Neuralgia.

A married lady had suffered from suppression for some months before she came under my care, this was caused by cold and damp. She now suffered intensely from pains of a neuralgic character: her strength was much reduced and the slightest physical exertion was followed by extreme exhaustion; she was in a dreadfully depressed condition and passed sleepless nights. Pains in the back were of frequent occurrence and she was unable to attend to her household duties. She was advised to try the effect of central galvanisation, the negative pole was applied to the epigastric region and the positive to the back of the neck, rather low down, in order to affect the great sympathetic nerve; after the third application the sleep

became more quiet, and she was able to take more exercise with a less feeling of fatigue. I felt, therefore, justified in encouraging her to hope for a favourable result. Week after week she regained strength, the neuralgia left her, in one month she could walk comfortably two or three miles a day, she then went into the country for change of air.

In these cases of neuralgia, associated with nervous exhaustion, the measures indicated are those which strengthen and invigorate. The diet should be generous as regards quantity, quality, and variety; the articles should be highly nutritious, and adapted to the digestive powers. All the varieties of wholesome food which the patient is able to take with relish should be allowed, and the appetite should be encouraged as much as possible. Meats, milk, farinaceous articles, and the different vegetables are to be combined in relative proportions according to the choice, habits, and experience in individual cases. If the invalid can digest cream and butter they are to be taken in moderation. A diet consisting largely of milk is highly to be commended; half a tumbler of warm milk with one table-spoonful of rum in it should be taken before rising in the morning. The intervals between taking food should be such as will secure the largest amount of nutriment which can be taken and digested during the twenty-four hours. Exercise in the open air is most important, and should be taken daily if the weather permits; but over-exercise and fatigue must be carefully avoided. The temperature of the body must be maintained by

warm clothing; the garments worn next the surface should be of flannel or woollen materials. The feet should be well guarded against cold or wet.

Paralysis of the Muscles of the Lower Extremity.

Mr. A. C. placed himself under my care at Brighton, his London physician advised him sea air and the use of hot sea water. His illness commenced with tingling and numbness in both feet, with anæsthesia and a loss of motor power: these symptoms continued for some months and he was able to walk only for very short distances; latterly he had become worse and feared he should lose altogether the power of walking; under these circumstances he was advised to have electrical treatment. I used faradisation to the lower part of the back and spinal cord, and also to the loins and legs. After three applications he was somewhat improved, he then applied hot sea water to the legs every night; when he had received ten applications of the faradic current he was able to walk a little, and in a short time longer he succeeded in walking two miles without difficulty. There is no doubt in this case that the applications of electricity to the spinal cord improved its nutrition and also the nutrition of the nerves. The muscles were stimulated by kneading and passive movements until the patient was able to walk comfortably.

It is most important that paralysed limbs should be kept warm; they must never be permitted to get cold. A good way to bring a paralysed arm or leg under the influence of dry heat is to take a common sewer-pipe as sold in the shops, of a suitable size and curvature, thoroughly heat it in an oven, line it with flannel, and let the limb remain in it until the heat is dissipated; it will retain the heat longer if covered

with flannel. This treatment improves the nutrition both of the muscles and joints, not only temporarily but permanently.

Reflex Paralysis of the Muscles of the Arm.

This patient consulted me with symptoms of peripheral paralysis, the attack came on after a miscarriage. Both the arms were partially paralysed, the muscles were wasted considerably, there was only a limited movement of the fingers, she was very sensitive to cold. This lady was of an excessively nervous organisation and was subject to hysterical attacks. The treatment consisted of both central and localised galvanisation three times a week. The improvement was gradual and progressive, and the effect was permanent: she entirely regained full power over the limbs.

Severe case of Sciatica caused by Walking too much.

A gentleman, æt. 40, desired my advice and assistance, for three years he had suffered more or less from pain at the back of the right thigh and inside of the leg. There was some wasting of the muscles, the pain was occasionally of a fearful character, at other times dull and heavy. He had been greatly overworked and this had brought on a condition of profound neurasthenia, he also suffered from liver derangement and gastric trouble. There was also a semi-paralytic condition of the legs, which came on after he had suffered severe pain, the muscles of the legs twitched a good deal in the morning. He thought this affliction was brought on by his having taken too much exercise. I recommended him a change to Brighton and to go out daily in a bath chair, he could then undergo a course of electrical treatment. After seven applications the pain ceased; one pole was placed over the spine and the other was passed up and down the region of the

sciatic nerve, it always soothed the pain and he completely recovered (a labile interrupted current was applied). When this patient returned home he took a galvanic battery with him, furnished with the single dial collector.

By a judicious and varied use of galvanisation or faradisation these cases can almost certainly be cured, but it is advisable to attend also to the laws of hygiene, which may be considered to embody the conditions, bodily, social, and mental, which are the most favourable to the healthy development of the body, and the most conducive to its well-being. Bodily hygiene includes, principally, good and abundant food, pure air, and a moderate amount of exercise. Mental hygiene includes rational, not extreme, mental exercise, and the regulation of the passions. The food taken by invalids should be of the most nourishing kind—meat, fish, fowl, eggs, milk, bread. The food should be well cooked, and taken in such quantities that the stomach can easily digest it. Some persons require food several times in the twenty-four hours, and in that period they can take and digest animal food two or even three times.

A moderate amount of wine as a tonic and gentle stimulant to digestion is undoubtedly beneficial. Two glasses of sherry taken with dinner, or two or three glasses of claret or burgundy, taken alone, or mixed with water or soda-water, according to individual peculiarity.

Suppression associated with Anæmia.

Miss —, about 28 years of age, was suffering from suppression, which had existed for some months, associated

with a condition of nervous exhaustion and debility; this unfitted her for the slightest mental or physical exertion. She was annoyed by cold hands and feet, and by sudden flushes of heat. I submitted this young lady to galvanisation (a stable continuous current) of ten milliamperes; on the third application the menses returned, she became strong, with a decided increase of nervous strength; the function has since continued regular.

Galvanisation is very valuable in all cases of suppression; it cures these affections by its permanently tonic effects on the system, and by its temporarily stimulating effects on the organs themselves. The applications should, if possible, be made a few days before the expected time. I am in the habit of treating these affections by the external method, this is as equally effective as the internal and is much more agreeable to the patient. One pole may be placed over the hypogastric region and the other over the lumbar region of the spine. The uterine organs can be affected by galvanisation applied along the spine; a few applications will usually bring about a successful result.

Suppression usually occurs in persons who have been exposed to a sudden chill, mental emotion, or to a moral or physical shock occurring about the time of the menstrual epoch.

Typical Case of Locomotor Ataxy or Tabes Dorsalis.

Mr. ——— desired my opinion on his case, he first noticed one morning a feeling in his legs as if they had fallen asleep, the feeling came on again and again during the day; for some weeks he felt nothing more and had nearly

forgotten the circumstances. He was then suddenly seized with peculiar pains in the limbs like electric shocks, about the same time he complained of a feeling of constriction round the waist, as if a rope was tied round it. If he shuts his eyes he is apt to topple over, and it is impossible for him to walk in the dark without holding on to something for support; he finds when he closes his eyes to wash his face, he is very liable to pitch forward against the wall. The pupils of the eyes are sluggish, the existence of the "Argyle-Robertson symptom" proved the case to be ataxy. He also complained of awkwardness in progression, he began to totter, and was unable to walk comfortably without support. He had consulted many physicians of many systems of practice, but had only obtained temporary relief. The disease was undoubtedly progressing. He considered the complaint was brought on by exposure to rain and cold, protracted mental excitement, and excesses of various kinds, bad habits and dissipation. The interrupted current was applied to the legs and the pains were quickly relieved, and co-ordination improved. This patient remained some time under my care, all the symptoms gradually disappeared, and he ultimately completely recovered. When he returned to his home in the country I furnished him with an induction apparatus so that he could continue to faradise the muscles. It is only by a careful discrimination alone of the many peculiarities of a case, and a judicious consideration of remedial means, that a successful issue can be obtained.

The diet in locomotor ataxy may always be nourishing and sufficient in quantity to satisfy the patient's demands. Cocoa, milk, sherry and soda water, or claret; white fish, mutton, beef, chicken and game; together with fresh vegetables, bread

and butter, and light puddings; these are all unobjectionable articles of diet.

On the contrary the patient must avoid strong ale, raw spirits, pastry, most salt meats, and indigestible articles of diet, particularly nuts and walnuts.

*Characteristic Case of Locomotor Ataxy commonly known as
Tabes Dorsalis.*

This remarkable disease was well marked in this patient; he had suffered for some months from what he calls rheumatic pains in the legs, they are sudden and come on in paroxysms; he also has double vision and ptosis of the upper eyelid. His legs give way in walking, he never takes his eyes off the ground, his steps are uneven in length, he has the gait peculiar to ataxic persons. He was often troubled with an attack of herpes, accompanied with pains which usually preceded the eruption by a few hours, then a patch came out with heat and itching, sometimes in the gluteal region, at others on different parts. He complained of a feeling of constriction or tightness round the waist, with a burning pain in the back, and a feeling of fulness and of oppression at the chest as if he would be suffocated. The knee phenomenon was absent on each side. All these symptoms were characteristic of ataxy, there could be no possible doubt of the nature of the disease; it was in fact caused by constitutional syphilis, by which he had been infected many years previously. This was a favourable case for treatment as the ataxy was of syphilitic origin; under appropriate remedies he entirely recovered.

Locomotor Ataxy produced by Sclerosis of the Spinal Cord.

The patient, a man about 52 years of age, suffered from all the usual symptoms of ataxy, including incoördination of movement, with some loss of muscular power, a

typical ataxic gait, Romberg's symptoms, also of that peculiar oscillatory motion of the eyeballs, called nystagmus, impaired and retarded sensibility of the lower extremities, lancinating pains, and loss of the knee-jerk phenomena. The disease was induced by severe colds, and came on after much fatigue; it commenced with a general weakness in the legs, which increased; he was then seized with pains in the stomach (crises gastriques of Charcot) and vomiting. The girdle sensation afterwards came on; this peculiar feeling, as if a cord was tied round the body, is often a sign of degeneration of the cord. In this case there was some hereditary predisposition, the disease also had occurred in other members of the family; it was, in fact, a case of hereditary ataxy. His mother had been attacked with paralysis, and an uncle was tabetic; a cousin also suffered from ataxy. Here there was clearly a history of nervous affections. This patient admitted that he "had lived very hard" in his younger days. The "swelling" faradic current was used in this case, the spinal cord, and also the limbs, were subjected to its influence. The course of this disease presents many variations, which are well illustrated by the various records I have given.

Invalids in whom there is any family history of nervous derangements, paralysis or apoplexy, or gout, must keep a strict account of their expenditure to the heathen Gods (Bacchus or Venus), and they must do their best endeavours to lessen such expenditure, and to keep it within very moderate limits.

Suppressed gout may predispose to, and be one of the immediate exciting causes of ataxy, so also may irregular or excessive emotions, also certain other chronic disorders of the nervous system.

Shaking Palsy of an Hereditary Character.

This patient came under my observation suffering from Paralysis agitans, which is also known as Parkinson's disease. The complaint in this case was of an hereditary nature, as his father, æt. 79, is still alive and suffering from the same disease.

This patient was about 44 years of age, tall, well built and well nourished. He exhibited the disease in all its classical characters; it commenced, two years before consulting me, with a trembling in the hands, so much so that he was unable to sign his name if anyone was watching him. These attacks came on very gradually and irregularly, but after a time they increased in severity and frequency. The disease afterwards extended up the arm, and ultimately one leg was attacked.

He first complained of a sense of weariness in the affected muscles, and he afterwards became excessively irritable and fidgety; there was also some tremulousness of the tongue and consequently a difficulty of speech, and all the affected muscles were slightly wasted.

This patient was treated with the continuous galvanic current and nervine tonics with the most happy result.

The arm is often the starting point of the disease, the loss of strength attracts the attention of the patient to his arm, and on examining he finds that the weakness is accompanied by wasting of the muscles. There is also usually some pain in the affected muscles. The disease then extends to the hand, thumb, and fingers, and then it gives to the hand the appearance of the talons of a bird of prey, it is then called the claw-shaped hand, or *main en griffe*, but this distortion happily seldom occurs unless the disease has been neglected in the commencement.

When the disease commences in the legs, the patient finds that he tires in walking sooner than he used to do, the muscles become weak and flabby, the calf of the leg wastes, and sometimes the ankle or knee gives way with the weight of the body. Soon afterwards pains simulating those of neuralgia are felt in the affected muscles, and the sufferer is unable to walk far without great fatigue.

Partial Paralysis of the Legs, following Diphtheria.

A short time ago I was consulted by a farmer, æt. 37, his family history was good, married, and of somewhat irregular habits. He was fair, and moderately nourished, but looked pale and ill. Of his personal history he said that he remembered having suffered from no special complaint, but that latterly he had been often ailing and somewhat rheumatic. He consulted me on account of an odd feeling in his left leg, and a certain degree of feebleness in the limb; this increased so much that he was unable to walk without support, and he began to fear that the paralysis was extending to the arms and hands, as he felt great difficulty in buttoning his clothes, and in carrying food to his mouth; he felt as if his fingers were covered with gloves, so that he was unable to hold small objects. He complained of numbness and tingling in the feet and hands, and this was accompanied with a feeling of cold and weight in the limbs. The legs were first affected, and he felt as if he were walking on cotton wool, or on some soft substance, he could not feel the ground perfectly. This case gradually improved under treatment, and on his approximate recovery I recommended him to go to Aix-les-Bains, in Savoy, as I hoped that a course of baths there would complete the cure, I also directed him to drink some of the Eau-de-Challes.

I have frequently visited Aix-les-Bains, the climate is healthy, and the hotels there are as comfortable and well conducted as any in Europe. The bath accommodation is excellent, and its arrangements are all that can be required to render it comfortable and effective.

The complaints against which the Aix waters have a real efficacy are numerous. In the first rank must be placed rheumatism, and especially chronic rheumatism of the joints, muscles, and viscera, which often yields to a combination of baths, douches, and shampooing (*massage*).

The manner in which this treatment is carried out at Aix deserves description. An invalid, for instance, who is unable to walk, would be carried from his bed to the Establishment in a closed *chaise-à-porteurs*, accompanied by an attendant (called a *sécheur*, or drying-man) carrying his bath towels, linen, &c. Arrived at the douche room, he is seated on a stool between two *masseurs* or shampooers, who knead him, rub him, and work his joints, according to the prescriptions and directions of the doctor. At the same time they direct on him two jets of mineral water, one—the warmest and of the highest pressure—upon his limbs; the other—cooler and of very weak force—upon his neck, back, and chest.

During all the time that the douche lasts, the patient is therefore bathed with a perfect stream of mineral water at a maximum temperature of 45° C. (113° F.), and a minimum of 16° C. (60·8° F.). He is

then dried, carefully wrapped in woollen coverings, and carried back in the *chaise-à-porteurs* to his bed, which has in the meantime been warmed, and where he can continue (if so directed) the process of sudation which had begun.

Motor Paralysis of the Lower Extremities.

This patient consulted me for the following symptoms. He was descended from a family some of whom had died of paralysis, at this time he was suffering from loss of power and partial paralysis of the right leg. The symptoms were preceded by numbness, which came on slowly and gradually increased, accompanied with myalgia. He was also troubled with vertigo and indistinctness of vision, with black specks floating before the eyes (*muscae volitantes*). His walk was shuffling from weakness of the muscles, and there was a tendency to spasmodic contraction. This complaint was no doubt brought on by violent muscular exertion, and undue indulgence in various excesses. He recovered under the use of chloride of gold and sodium; he was recommended to sponge the legs every night with hot salt and water. The interrupted faradic current was applied to the palsied muscles; the improvement was marked and immediate, the muscles soon became firmer and larger; he was also able to take a moderate amount of exercise in the open air.

Exercise is most important, as inactivity tends powerfully to engender a state of system leading to disease. Exercise to be useful should be moderate and regular; if excessive at any one time, it may produce injury by exciting the action of the heart and accelerating the flow of blood in the arteries. In all cases the amount of exercise must be carefully

apportioned to the age and strength of the patient. Fresh air is highly valuable, especially to those of weak habit, and a bracing air, such as is obtained in elevated localities, is peculiarly advantageous to many persons. Exercise and fresh air produce their beneficial effects by giving tone to the stomach and digestive process, by increasing the functions of the different secreting organs, and at the same time by imparting strength, both to the nervous and muscular systems.

The cutaneous function must not be neglected, the clothing should be sufficiently warm to protect the surface, and especially the feet from being chilled, but any undue warmth or overheating of the body must be carefully guarded against.

Paralysis from Brain affection.

A merchant, about 35 years of age, suddenly experienced an intense sensation of giddiness, a sharp pain in the head, palpitation of the heart; flashes of light appeared before the eyes, noises in the ears, and he became unconscious. He almost immediately regained his senses, but on trying to stand found he was paralysed in both legs, his speech also was affected; after a time the most severe symptoms passed off, but his gait was uncertain and staggering, and he experienced numbness in the limbs, and much weakness of the muscles. His sleep was disturbed by unpleasant dreams. These symptoms were caused by congestion of the brain. He had suffered from neurasthenia some years previously. Under appropriate treatment he entirely recovered.

Congestion of the brain is most commonly caused by mental anxiety, prolonged emotional disturbance,

or long continued intellectual exertion, or from violent physical exercise; it may be produced by overstraining in attempts at defecation. An overloaded stomach or derangement of the liver may act as an additional disturbing cause.

Spinal Paralysis of two years' duration.

A young lady was brought to me by her mother to be treated for paraplegia, with which she had been affected for several months. She had been in delicate health for a long time, and had gradually lost the power over the arms and legs, and was scarcely able to walk without assistance. The affection commenced with backache, and various sensations of numbness, "pins and needles," pain in the limbs; after a night's rest the legs were weaker and she felt difficulty in moving about; the paresis was first manifest in the lower limbs, afterwards the arms became affected and the muscles wasted. There was a cessation of menstruation, which was caused by damp from playing at tennis on the wet grass, and this was the origin of the complaint which began in the lower limbs. I applied an ascending spinal cord-nerve current of eight milliamperes three times a week, amendment began in the arms, after four weeks she was so much improved that she could walk without assistance. At the end of six weeks she could use the arms and legs well and walk over a mile. After the third application of electricity the monthly period appeared; the only medicine given was the liquid extract of ergot. As the wasted muscles had not entirely regained their original life, I supplied an induction apparatus for the patient to take home with her. It sometimes takes a long time to restore atrophied muscles. I instructed the patient to apply the induced current every day for fifteen minutes.

In spinal disease the dry cups are valuable adjuncts to other treatment. A hot douche may

also be applied to the spinal column over the diseased part of the cord for five minutes every day. The temperature of the water should be 104° Fahrenheit.

Syphilitic Paraplegia and Softening of the Spinal Cord.

A civil engineer consulted me under the following circumstances. Many years previously he had contracted a contagious disease abroad, and considered his present troubles arose from that not having been properly cured. He complained of pains about the spine and pelvis, with formication, numbness and tingling in the limbs. He had gradually lost the use of his legs, and was unable to walk without assistance. First one leg was affected, and gradually the disease attacked the opposite limb. He also suffered from shooting pains in the head and weak sight; he had lost all his energy and feared the paralysis would become complete; he had bladder troubles, and complained of coldness in the extremities. The patient was now in a condition of utter helplessness. I inferred that he was suffering from an intra-spinal syphilitic tumour, and advised the necessary remedies; I had the satisfaction of seeing a gradual but steady improvement take place, till eventually in the course of a few weeks the cure was complete. Dissipation, bad habits, and excessive smoking all conduced to bring on this affection.

Incipient Softening of the Brain.

I was requested to attend a gentleman whose illness was caused by some cerebral affection. He suffered from loss of memory, double vision, muscæ volitantes, a sensation of numbness extending through the left arm and leg, a feeling of giddiness, and ringing in the ears, frequent headache, a fullness and weight over the head; his speech was slightly affected from paralysis of the tongue. The left arm and leg were very weak, in fact they were becoming paralysed. He could not lift the leg fairly from

the ground, and on one occasion he fell from the leg suddenly giving way at the knee. This patient also suffered from that peculiar abnormal emotion called gynophobia, and in a less degree from anthophobia. All these symptoms pointed to cerebral softening. The disease had evidently been brought on by over-work and intense mental trouble; in early life he had indulged largely in the use of alcoholic liquors, and was a heavy smoker. He was advised to abstain from all work, and to have change of air. Under appropriate medication he soon improved; at the end of ten days he had recovered power on the paralysed side. The treatment was continued, and after a month the headache and giddiness were entirely gone, he was then able to go out. He then went to the south and has since remained in excellent health.

In incipient softening of the brain or spinal cord, a large portion of the day should be passed in the open air, bodily exercise should be regular but not excessive. The food must be nutritious but not indigestible. Warm sea-water baths are to be recommended and may be taken two or three times a week. Overheated rooms should be avoided, the clothing must be warm in winter, and cool in summer. The mind should not be overtasked, and the emotions must not be unduly excited.

A Condition of Paræsthesia, with a disposition to Paralysis of the Legs.

“After reading your work on paralysis, I am anxious to place myself under your care.

“I have a strange feeling in my foot, my left foot, it commenced first with a creeping sensation, and at times like pins and needles, the foot feeling very cold and heavy with a difficulty of raising it from the ground, and the

moment I do so I feel that creeping sensation, just like when one's foot goes to sleep and is coming all right again. I consulted my own doctor, who told me it was rheumatic gout. I, however, feel quite assured it is not that, but I consider, after reading your book, that it is a case described under the head of chronic inflammation, or sclerosis of the spinal cord. I am quite unable to consult you personally, the distance from London being so great, and I am too unwell to undertake the journey. I shall be much obliged if you will consider my case, and if possible send me the requisite remedies."

I placed this patient under appropriate treatment, remedies were sent to relieve the hyperæmia and congestion of the spinal cord. Little by little improvement took place; I was afterwards informed that this patient was quite restored and able to walk about with ease and comfort.

Spinal Paralysis associated with Debility and Nervous Exhaustion.

Some months previous to consulting me this lady had gradually lost the use of her limbs, she complained of great weakness of the legs, mostly of the left, if she tries to walk she does so in a tottering way, the muscles were slightly wasted, and the legs feel numb and cold; there is a slight tenderness of the spine. The patient was somewhat excitable and nervous; the sleep was disturbed and the digestion weak; she complained of great bodily prostration. This condition was evidently caused by anæmia of the spinal cord. This lady was cured by spinal galvanisation; a medium-sized disk electrode was applied to the cervical region of the cord, a current of eight milliamperes was passed through the spinal nerves, the anode was directed to the lumbar spine; consequently the current was an ascending one. A "point douloureux" was discovered and this was subjected to the influence of the anode, according to the "polar method."

Debility of the nervous system, and whatever tends to produce functional enfeeblement of the nerves, may be named as tending to induce paresis in persons predisposed to that condition.

It is important that the diet be of a good and nutritious quality. In those cases where the habit is full, the food should be plain; if there is any disturbance of the digestive organs, all articles difficult of digestion must be omitted, as for example, pork, pastry, gravies and sauces, pickles, cheese, beer, and cakes of all descriptions. Exercise and fresh air are in all instances beneficial, the state of the bowels is to be noted, constipation should not be permitted to exist, the bowels should be open at least once daily.

The food should be light and nutritious, white fish and meat may be taken, a little sherry or good bitter ale for dinner, but spirits must be forbidden. Cold and damp are injurious; the clothing should be warm.

Sclerosis of the Brain and Spinal Cord.

This patient, æt. 35, tall, florid, came under my treatment with the following symptoms. He had been unable to follow any occupation for the last three years through the symptoms he now complains of. His hands were very weak, so much so that he could not pick up anything, and he complained of a feeling of cramp in the arms. He could not walk without the aid of two sticks, and when going down stairs the legs would cross one another, and in going upstairs he is obliged to throw the head back before he can raise the left leg up to the next stair, and

he cannot lift the right one up without getting the left leg up first, and then he is obliged to place the right foot upon the stair.

When sitting down he feels as if he could walk, but directly he rises a stiffness takes him in the back of the thighs so that he cannot move one foot before the other without the aid of two sticks, and then with great difficulty.

If he writes for any length of time it causes great pain in the shoulders, and he is obliged to go and lie down. The eyesight was misty, and the eyes are constantly rolling from side to side (nystagmus). Any attempt at movement caused a tremulousness of the limbs, his speech was peculiar, the words came out slowly and deliberately ("scanning").

As we advance in life our experience naturally increases; then the mental horizon expands, and much more is seen in medicine, as in everything else, than in the earlier part of life. It should always be the aim of the physician to cure the disease as rapidly and effectually as possible, every known means calculated in any way to relieve the disorder should be brought to bear upon the case.

Chronic Inflammation of the Membranes of the Cord.

The patient, a dark, florid, moderately healthy looking man of forty-five, after being much exposed to cold and wet weather, had been seized with pains in the back, increased by movement, and hyperæsthesia of the feet, which prevented him from walking; there was great tenderness on percussion in the lumbar region of the spine, and some spasm of the muscles of the back. One day the patient could walk tolerably well, while the next he could scarcely move a limb.

This gentleman rapidly recovered under the use of ergotine; at the same time the primary galvanic current was applied to the spine, and the induced current to the legs.

Tertiary Manifestations of Syphilis.

Mr. —, an auctioneer, æt. 30, came under my care. The patient is a spare, pale, but fairly healthy looking man. He had a clear history of syphilis of more than five years' standing. The secondary symptoms had evidently been slight, but he now suffered from tertiary manifestations. He experienced a tingling sensation in the muscles of the left leg, accompanied by slight muscular twitches, these continued for some weeks, when the sensations gradually increased until numbness supervened, which spread all over the limb. The leg then became more feeble so that he was scarcely able to walk. A tingling sensation then came on in the arms and fingers, and he had nearly lost all power in the left arm. He complained of languor and a general sense of oppression. He had suffered from cracks and soreness in the tongue, and his hair came out in large quantities.

The history of this case showed that the patient was suffering from cerebral syphilis, probably in the form of a gumma.

The treatment in this case consisted in counter-acting the mal-action of the poison, and in assisting its elimination and annihilation from the system.

Paralysis of Motion from Spinal Affection.

This case came under my observation some time ago. Many months previously the patient noticed that slight exertion fatigued him, he tired very readily, and after walk-

ing experienced a sensation of weariness in the thighs and loins; one foot then became weak and he often stumbled from not being able to lift the foot high enough to clear the ground. After a time he required support to enable him to walk; at first he used a stick, and eventually he required the assistance of an attendant; about this time it was noticed that the muscles were becoming emaciated. Pain also came on in the back and occasionally flying pains in the limbs. This was one of those peculiar chronic inflammations probably associated with softening of the cord, in all probability brought on by cold, over exertion, and specific affection. I suggested the use of the primary uninterrupted galvanic current to the spinal column; this was employed with favourable results. The necessary medicines were prescribed, and I have since heard that this patient entirely recovered.

*Annesic Aphasia accompanied with Paralysis and Softening
of the Brain.*

Mr. —, formerly a solicitor, consulted me in the spring for what was considered by his friends to be softening of the brain. His memory had formerly been remarkably good, but now he was exceedingly forgetful, especially as regarded words; his conversation was marked by great hesitancy, from his not remembering the words he wished to use, and some words he could not pronounce at all; there was slight paralysis of the arm and leg on the right side, and the loss of power was gradually getting worse. The tongue was slightly paralysed. He now complained of fulness and pain in the head, and occasionally giddiness. The patient had formerly suffered from rheumatism, and the heart was somewhat affected. This complaint was undoubtedly caused by embolism of the left middle cerebral artery. In these cases of aphasia the treatment is of course that of the pathological condition to which it is due.

Paralysis of the Muscles of the Right Arm.

In this case the patient complained on waking in the morning of a pain in the upper part of the arm, weakness in the right hand, and a feeling of tingling and stiffness in the fingers. This weakness extended until the arm was nearly paralysed, she could not raise the arm to the back of the head, there was also some pain in the shoulder joint, the muscles were considerably wasted, loose, and flabby, and the patient feared she should entirely lose the use of the arm unless something could be done to remove it.

The disease was cured by faradism, and friction with hot salt and water, which was applied to the arm every night.

This complaint was caused by rheumatism and exposure to cold, and was probably aggravated by a sprain which caused some temporary inflammation.

Neurasthenia mistaken for Softening of the Brain.

M. C. came under my treatment on account of brain troubles; that is, he was suffering from functional enfeeblement of the brain: his family physician suggested that he had softening of that organ. He was between 30 and 40 years of age, dark, thin, and by occupation a traveller. He confessed to the free use of alcoholic beverages, and was a considerable smoker. He complained of constant headache, languor, lassitude, want of buoyancy, aching of the limbs and mental depression; he was wakeful during the night, and felt in the morning jaded and worn out. He became apprehensive that his powers were giving way, and he feared he was about to be seized with some serious malady.

This condition of nervous asthenia caused much discomfort and unhappiness to the patient, and rendered him irritable and morose; all his troubles were brought on by the cares and responsibilities of business and long continued anxiety. He had latterly complained of much

weakness in the limbs, and this increased his morbid condition: he also suffered from that emotional disturbance known as claustrophobia. I advised him to eschew the worship of the heathen goddess Venus, and prescribed a course of nerve restorers to improve the condition of the brain and to increase the nutrition of the nervous tissue. Brucine in combination with lupulin are very valuable remedies in this complaint, I regard them as most useful brain toners: the chloride of gold may occasionally be required if the powers are very depressed. I have in some cases used *cannabis indica*, with most happy results.

I am convinced from cases I have seen that many functional disorders and some of the lighter kinds of structural changes may be caused as the result of a primary neurasthenia, in fact severe nervous derangements may be set up which gradually overshadow the original mischief.

Loss of Power in the Muscles of the Left Arm.

Mrs. H. had suffered from weakness of the left arm for some time, she was healthy looking, and declared herself quite well except from this paresis, which came on with sensations of "pins and needles," with stiffness of the fingers on first waking in the morning, there was also some pain in the shoulder. Some time ago both hands were numb, this lasted for a few minutes only; but a week later partial paralysis of the arm came on, and she feared she should lose the use of it. She can now only move the fingers a little. After about ten applications of the faradic current she was approximately cured. The paresis in this case was brought on by a strain of the muscles, but paralysis of the arm is often induced by cold or rheumatism.

In some diseases a galvanic battery will be required, this battery will furnish the galvanic, voltaic or constant current, that is, the electricity of chemical action, it is also called the primary current: this current should be both continuous and constant, as any interruptions would alter its character.

Other cases of disease would require a faradic apparatus, in which the current is generated in a coil of copper wire, this is called the induced or interrupted current, it acts as a very effective stimulus to the nerves and muscles; if only a stimulant effect is required this current as a rule will be effective. The galvanic current, on the other hand, acts as a stimulant to the nerves and muscles, and in addition it increases the nutrition of the parts through which it flows; it also modifies the nutrition of the nerves and trunks of the central organs of the nervous system, and it may be used in many cases in which the faradic current would be inapplicable. The constant current as a rule will be found more useful in treatment of paralysis, and also in chronic diseases of the brain or spinal cord.

Chronic Softening of the Brain, brought on by protracted Emotional Disturbance and Excitement.

A merchant consulted me under the following circumstances. He was about 45 years of age, tall, florid, thin and weakly looking; the family history was good. The disease had come on very insidiously with impairment of memory; he had lost power in both arms and legs, his gait was titubating, he walked with some difficulty, he

complained of pain in his forehead, and giddiness with weight and constriction about the head. The weakness commenced in the leg, which suddenly gave way at the knee, and occasionally the patient had fallen down from this cause. There was some difficulty of speech. He had also a feeling of numbness extending through the whole arm and leg.

This was a case of incipient softening, induced by worry. To relieve the pain in his head I applied the dry cups to the back of the neck. In three days the headache was much relieved, and in fact nearly gone, his memory improved; after another week the numbness was no longer remarked. I then advised the primary galvanic current to be applied to the mastoid processes, and the induced current to the arm and leg, each paralysed muscle receiving a full share of attention. It was not long before signs of returning power were noticed, the strength became greater in the arm, and he was able to extend the leg better. In a few weeks I had the satisfaction of seeing such a degree of improvement as to constitute an approximate cure. I then recommended change of air; he remained away for four weeks, and on his return was to all appearance well.

Progressive Atrophy of the Face (Unilateral).

A clergyman from Devonshire, suffering from this remarkable affection, consulted me. Some years previously he had noticed a slight degree of weakness in the muscles of the left side of the face. It was then noticed that the left side of the face was different from the right, and careful examination showed that there were two depressions. Some of the muscles at the angle of the mouth were atrophied. The first symptom that attracted his attention was a peculiar discoloration of the skin; a white spot appeared and gradually spread, after a time other spots appeared, and coalesced so as to form a patch of considerable size; the white colour afterwards passed away, and left a

brownish tint: at these spots the wasting commenced. The hair, eyebrows, and beard began to fall out and change colour. The left eye was less prominent than the right; it appeared sunk, and smaller. Occasionally he complained of numbness of the face. The whole of the left side of the face was smaller than the opposite side. This singular disease is of a progressive character: it is evidently of nervous origin. The wasting of the muscles may often be arrested by the application of the primary current; the galvanic and faradic current should be used alternately to the atrophied region, and galvanisation of the sympathetic nerve should on no account be neglected; by these combined means I have succeeded in arresting the course of this rare affection.

A case of Functional Weakness of the Spinal Cord, usually termed Neurasthenia Spinalis.

“Having obtained one of your books, and since reading same I feel sure you can do me some good with your experience of the nervous complaint from which I suffer most acutely.

“I have such a want of confidence in myself at times that I cannot even pass a tea cup, or hold it without shaking violently when any one is looking on, and when I have to sign my name before any one, a spasm seems to come over me which prevents me from doing it legibly.

“I am unable to take much out-door exercise, from a muscular weakness in my left leg, but am able to walk to a moderate extent. I live very temperately both in eating and drinking, but when I have got any writing to do I cannot get on without a little stimulant, which I want if possible to give up.

“My troubles first began with an acute pain in the sole of the left foot, and then came the paralysis in the bladder, which lasted a month. Since then the weakness in my left leg, want of muscular power and nervousness generally

of the whole system has increased as to prevent me returning to my work.

“I have tried many things, but none seem to have done me any good. If you suggest any remedy I shall be glad to put myself under your treatment.”

This patient rapidly recovered under a course of nerve tonics.

Cases of paralysis or weakness due to chronic degeneration of the spinal cord or its coverings are often benefited by a course of hot baths at Wiesbaden; other cases of a functional nature will derive more benefit from the Homburg waters, especially if the pine-leaf baths are taken at the same time. Mud baths can also be obtained there, they are very soothing in painful affections of the nervous system.

The German physicians recommend the salt and carbonic-acid baths of Nauheim, near Frankfort, for the cure of chronic inflammation of the spinal cord, but I have seldom known them to do any good, as from the excessive quantity of carbonic-acid they contain, they are highly exciting and too stimulating for most constitutions. I have seen much more benefit follow warm sea-water baths taken at a temperature of from 94° to 96° Fahrenheit; if the patient is unable to visit the sea-side he may take an ordinary brine bath, but in either case the immersion should not be too prolonged.

The tonic and alterative effects of sea-air present advantages which in combination with warm sea-baths gives them a value which artificial salt baths do not possess.

Nearly every case of spinal paralysis will derive some benefit from the judicious application of electricity; the primary galvanic current should be applied to the spinal column and on each side of the spinous processes, the application may be made two or three times a week and should last for about ten minutes; a current of from 5 to 15 milliampères should be used. If the muscles of the limbs are atrophied, the faradic or induced current should be used to them, each emaciated muscle should be carefully faradised, and the current should be of moderate power. It is seldom that any case will entirely resist the primary current to the diseased portion of the cord combined with the application of the induced current to the affected muscles. To carry out this treatment thoroughly, two different kinds of apparatus will be required, one for furnishing the primary or galvanic current, and the other for yielding the induced or faradic current. It is impossible for the physician to treat successfully paralysis or other diseases of the spinal cord without using both these agents. Electricity is useful in all cases of weakness or emaciation of the muscles, as well as in cases of true paralysis; it is also indispensable in many other diseases. In cases requiring lengthened treatment, it will be often desirable to provide the patient with the proper apparatus and instruct him how to use it in his own home. Expensive instruments are not necessary, but they must be of good workmanship, and the best materials only must be used in their manufacture. There is no

single therapeutic agent so useful as electricity in paralysis, it will often help a sufferer on the road to recovery when everything else has failed.

The good effects of electrical treatment are sometimes not developed until after the course is completed ; other systems of treatment, and also many medicines act in precisely the same manner. Electricity obeys the same law, and in certain constitutions, and in many chronic diseases prepares the way for a perfect and permanent recovery. Some patients derive no benefit while at the sea-side, or on the mountains, or during their holiday ; but the good effects appear after they have returned home ; in just the same way the beneficial results of electricity are developed after the course has been abandoned, and the patient may continue to improve for some time after the applications have been received.

DRY CUPPING.

(Without Loss of Blood.)

As Dry Cupping has often been recommended in these pages, I think it advisable to make a few remarks respecting it. In the first place I do not use the old-fashioned glasses, spirit lamp, &c., which requires the air contained in the glass cupola to be exhausted by the aid of a spirit lamp; but I use an air-pump with valved glasses to exhaust the air, so that the amount of suction can be regulated with the greatest nicety and without the slightest risk to the patient. The application of dry cups is a very useful proceeding in all cases of internal congestion, the blood being drawn towards the surface by atmospheric exhaustion, hyperæmia of the internal organs being thereby relieved.

Dry Cupping is especially to be recommended in nearly all painful disorders, such as lumbago, sciatica, and other allied affections. It may also be advantageously employed in painful diseases and congestion of the spinal cord, spinal paralysis, chronic inflammation, hyperæmia of the internal viscera; it is one of the most powerful means of relieving internal congestions, it acts by bringing the blood-supply to the surface, and thereby relieving the internal organs.

The principal use of Dry Cupping is to diminish or counteract any morbid process which may be going on in an internal part; by stimulating the blood vessels on the surface we decidedly lessen the circulation of the deeper parts, and thus restore tone to dilated and paralysed capillaries.

MASSAGE.

This process is now recognised as a valuable adjunct in the treatment of paralysis and other nervous degenerations.

Dr. Morgan, an eminent physician, gives the following instructions for carrying out the plan fully:—Pinch the surface of the skin from below upwards with the view of stimulating the cutaneous nerves. Suppose the lower extremities to be paralysed, the skin of the foot is first drawn up into successive folds and lightly pinched. The skin over the whole of the leg, and finally that of the thigh, is gone over in the same way.

Give passive movements to the joints, first moving each of them separately, and then altogether.

Shampoo the limb well. This is done by lubricating it with some bland oil, which is well rubbed into the surface by the tips of the fingers passing from below upwards, the spaces between the muscular groups being specially selected for rubbing.

Work the muscles well with the fingers, each muscle or group of muscles is grasped between the ball of the thumb and the fingers, and well kneaded and rolled.

Slap the muscles well with the ulnar border of the hand.

Grasp the lower portion of the limb between the hands, and then draw them slowly and firmly upwards. This movement should be repeated some twelve or fifteen times. In this manner the veins are emptied, and the circulation quickened.

ESSENTIAL REMARKS.

It is of the utmost importance that all internal remedies should be prepared with the greatest nicety and care, and also that the ingredients should be of absolute purity and of the finest quality, consequently my remedies are always prepared by myself, and all preparations are thoroughly tested before being used. I consider it of great advantage to a sufferer from disease to be certain that his medicines are of superior quality and carefully amalgamated ; I have therefore for many years past departed from the usual rule of physicians, and instead of giving the patient a prescription, I supply him with appropriate remedies, of the purity of which I am certain. It is only by a careful discrimination alone of the many peculiarities of a case, and a judicious combination of remedial means, that a successful issue can be obtained.

The success which has attended the administration of my remedies, I believe to be due not only to the peculiar form in which they are prepared, but also to the unremitting care taken in the skilful manipulation which is required.



CONSULTATIONS

Personally or by letter, on TUESDAYS, WEDNESDAYS, and
THURSDAYS from 10 a.m. to 1 p.m.

10, OXFORD TERRACE, HYDE PARK,

LONDON.

At BRIGHTON, by appointment only, on FRIDAYS and SATURDAYS.

For the convenience of Invalids residing at a distance, and unable to consult the Author personally, a form of questions has been prepared, which can be filled up by the patient. This form will be forwarded on application, with any other particulars desired.

